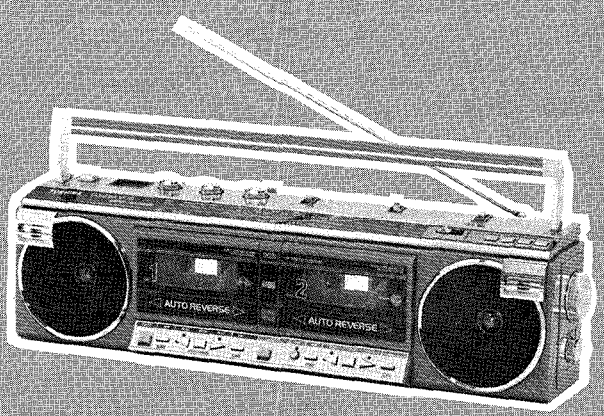
SERVICE DATA
FILE NO. 110-417

TOSHIBA

STEREO RADIO CASSETTE RECORDER

RT-SF75



SPECIFICATIONS

Cassette Tape Used:	Normal:	C-30, C-60, C-90	
	Chrome:	C-46, C-60, C-90	
	Metal:	C-46, C-60	
Tape Speed:	4.8 cm/sec.		
Track System:	Four-track two-channel stereophonic		
Recording System:	AC bias		
Erasing System:	AC erasing		
Frequency Response:	FM: 88 MHz to 108 MHz		
	SW_2: 7.5 MHz to 22 MHz		
	SW_1: 2.3 MHz to 7.5 MHz		
	MW: 526.5 kHz to 1606.5 kHz		
Intermediate Frequency:	FM: 10.7 MHz		
	SW_2/SW_1/MW: 455 kHz		
Speakers:	100 mm (dia.) dynamic x 2		
	15 mm (dia.) piezo-electric type x 2		
Jacks:	[MIC] jack x 2, Impedance 200 ohm to 2 kohm		
	[PHONO/AUX] jack x 2		
	[PHONES] jack x 1		
Power Supply:	AC 100-127V/200-240V, 50/60 Hz		
	DC 9V IEC R14 ("C" cell) x 6		
Output Power:	3W x 2, 10% Distortion		
Power Consumption:	22W		
Dimensions:	494(W) x 140(H) x 133(D) mm		
Weight:	3.35 kg (without batteries)		

Specifications are subject to change without notice.

K/R-VF

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1. OPERATING CONTROLS

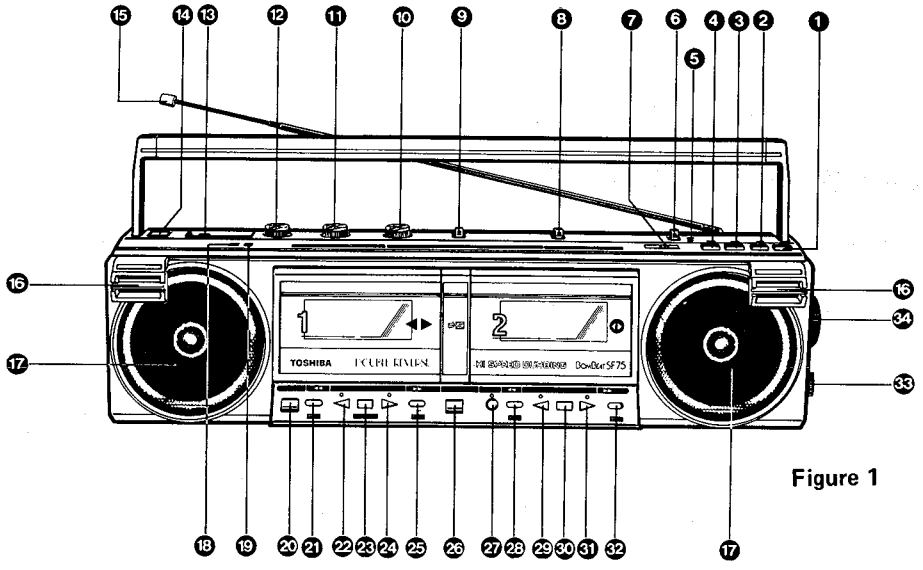


Figure 1

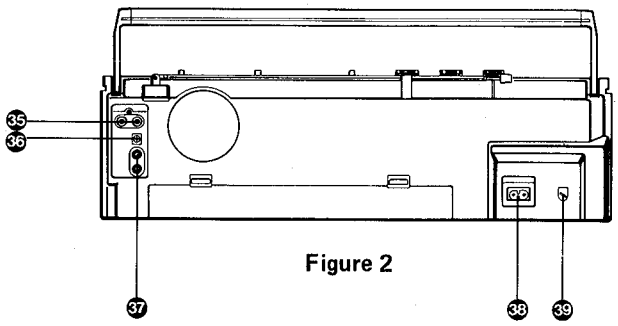


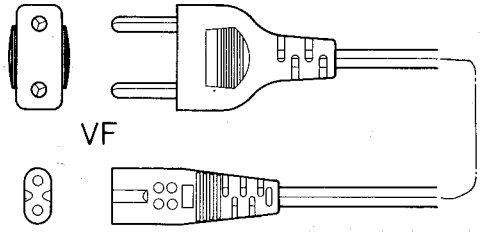
Figure 2

❶ [EDITOR] Button
❷ [PAUSE] Button
❸ [HIGH SPEED DUBBING] Button
❹ [DUBBING] Button
❺ Built-in Microphone
❻ [BAND] Selector
❼ [REVERSE MODE] Selector
❽ [FUNCTION] Selector
❾ [BEAT/MODE] Selector
❿ [VOLUME] Control
⓫ [TONE] Control
⓬ [BALANCE] Control
⓭ [PHONES] Jack
⓮ [POWER] Switch
Note: POWER OFF position: This unit remains connect to mains supply in the POWER OFF position. Disconnect the power cord when the unit is not going to be used for a long time.
⓯ Telescopic Antenna
⓰ Tweeter Speakers
⓱ Woofer Speakers

⓲ [POWER/BATT] Indicator
⓳ [FM STEREO] Indicator
⓴ [EJECT] Button
㉑ [◄◄] Button
㉒ [PLAY] Button
㉓ [STOP/DUBBING STOP] Button
㉔ [PLAY] Button
㉕ [►►] Button
㉖ [EJECT] Button
㉗ [REC] Button
㉘ [◄◄] Button
㉙ [PLAY] Button
㉚ [STOP] Button
㉛ [PLAY] Button
㉜ [►►] Button
㉝ [FINE TUNING] Knob
㉞ [TUNING] Knob
㉟ [PHONO/AUX] Jacks
㊱ [PHONO ⏚] Terminal
㊲ [MIC] Jacks
㊳ [AC POWER] Socket
㊴ Voltage Selector

Name Label

Power Cord



2. DISASSEMBLY INSTRUCTIONS

FRONT CABINET REMOVAL

1. Remove nine knobs Ⓐ .
2. Open Tape 1 and Tape 2 cassette lids by pushing eject button.
3. Remove six screws Ⓑ (ϕ3 x 35mm) from the back cabinet.
4. Remove one hook Ⓒ on the bottom side of front cabinet.
5. Remove speaker cord, and the front cabinet can be removed from the unit.

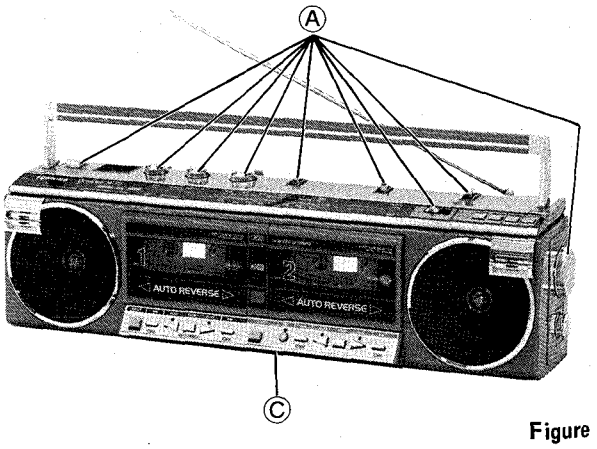


Figure 3

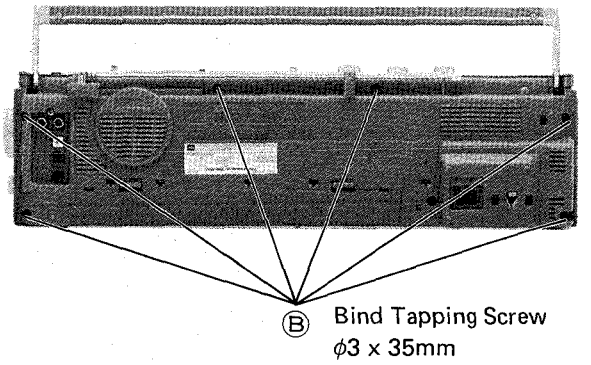


Figure 4

MECHANISM OPERATION P.C.BOARD REMOVAL

1. Remove four screws Ⓓ (ϕ3 x 12mm), and the Tape 1 and Tape 2 mechanism operation P.C.Board can be removed.

MECHANISM ASSEMBLY REMOVAL

1. Remove four screws Ⓔ (ϕ3 x 20mm) and remove connectors to main P.C.Board, and then Tape 1 and Tape 2 mechanism assembly can be removed.

MAIN P.C.BOARD REMOVAL

1. Remove mechanism assembly.
2. Remove three screws Ⓕ (ϕ3 x 12mm) and one screw Ⓖ (ϕ3 x 16mm).
3. Remove main P.C.Board by pushing six hooks Ⓗ .

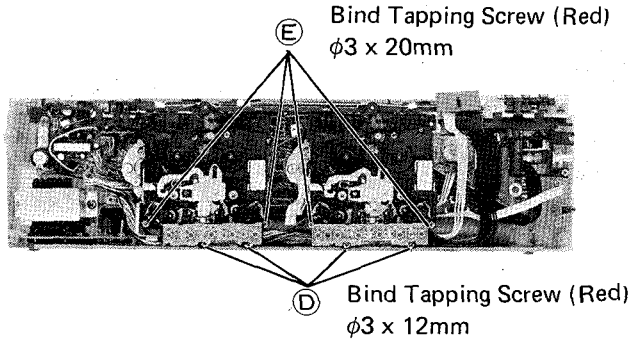


Figure 5

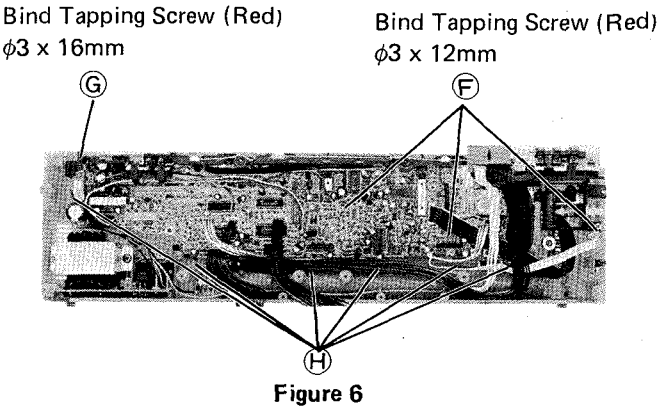


Figure 6

3. DIAL CORD RESTRINGING

1. Thread both ends of dial cord through eyelet so that specified length is obtained, and then squeeze the eyelet
   Tie rest of dial cord ends two times and apply adhesive to the nots.
2. Hook dial cord prepared in step 1. to drum spring as illustrated, and insert the cord end to threading cutout of dial drum.
3. Turn tuning capacitor shaft clockwise fully. Proceed stringing in steps ① to ⑩ .
   Hook spring to drum.
   Note: When turning dial cord on the tuning shaft, make sure so that the cord is not overlapped each other.
4. Turn tuning capacitor shaft counterclockwise fuuly and move dial pointer until center of the pointer reaches stop line provided on the frame.

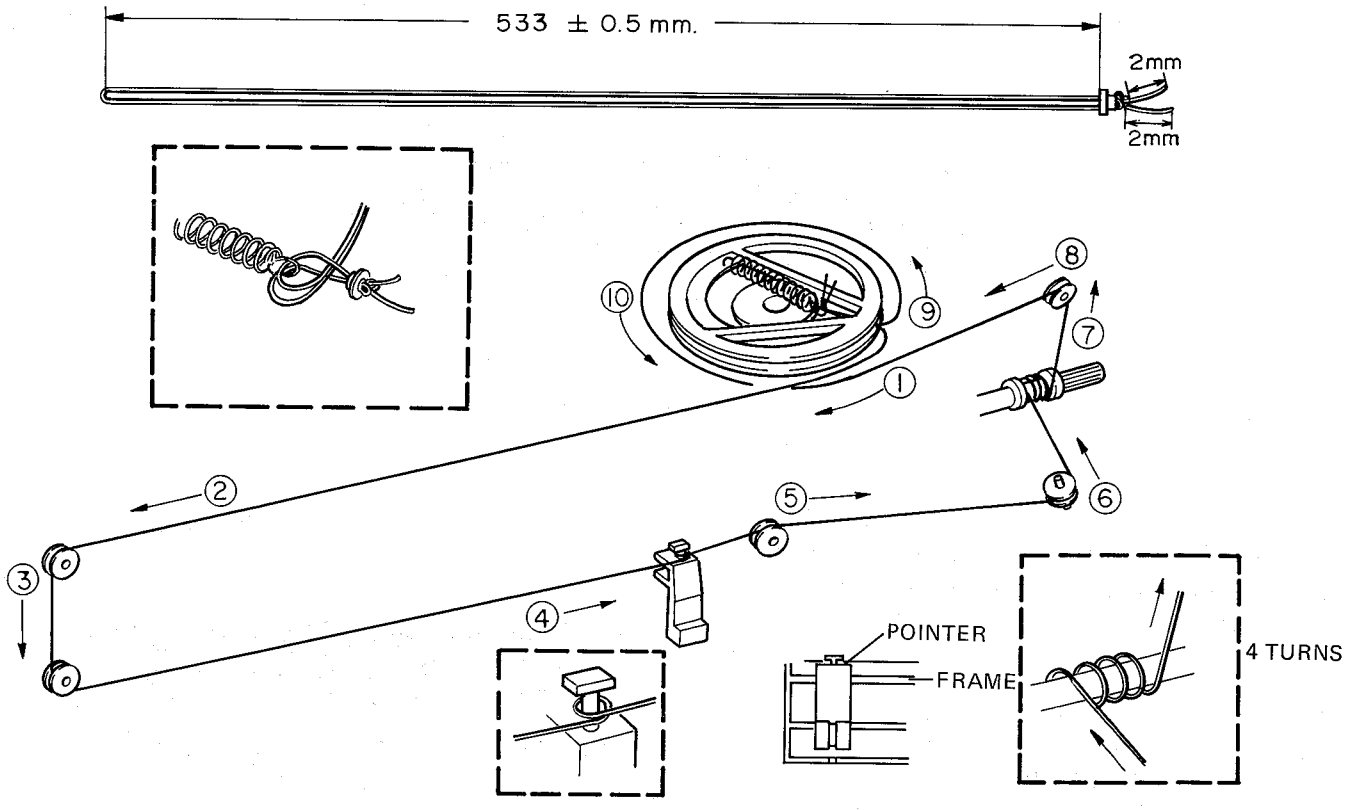


Figure 7

4. BLOCK DIAGRAM

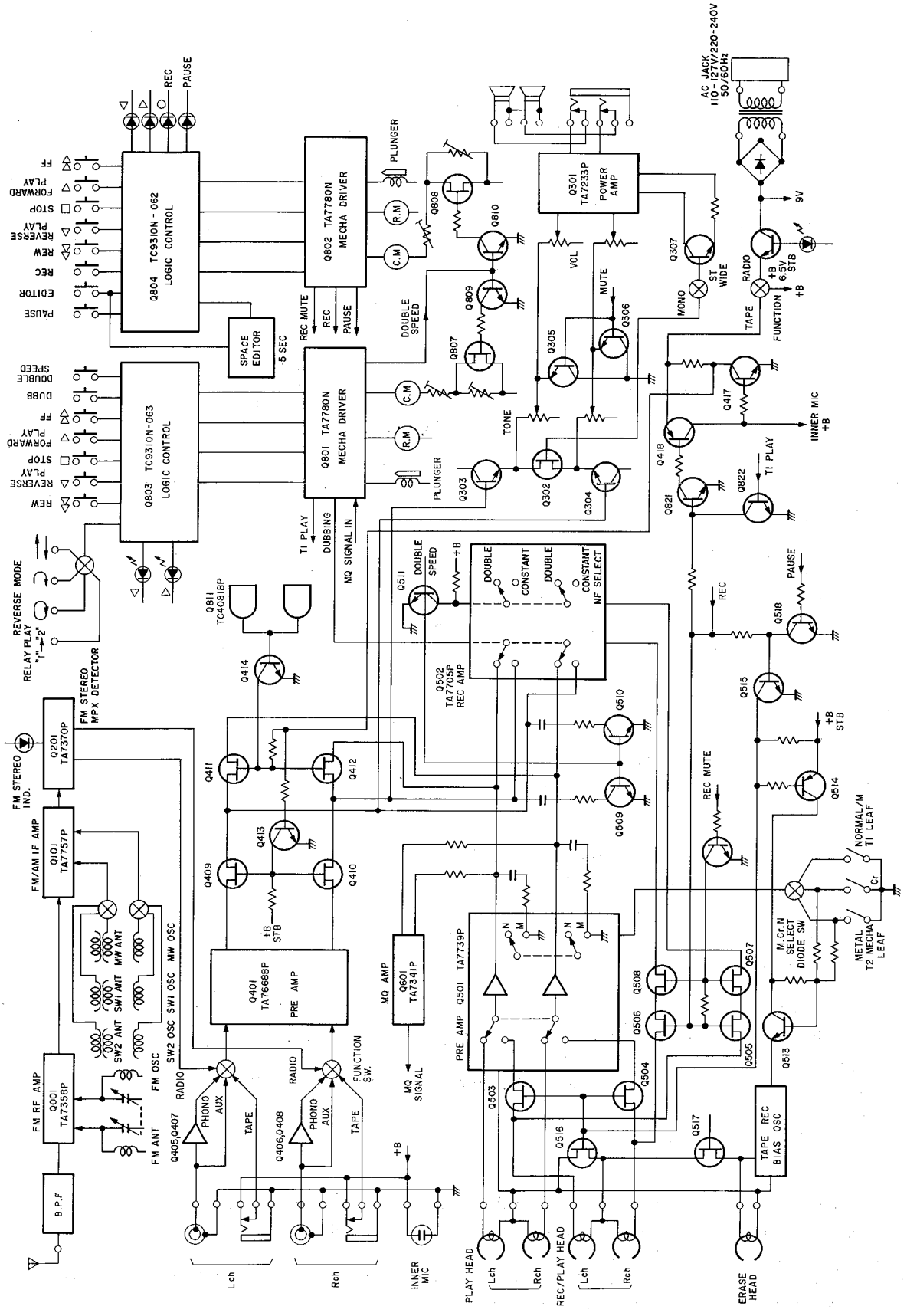


Figure 8

5. ADJUSTMENTS

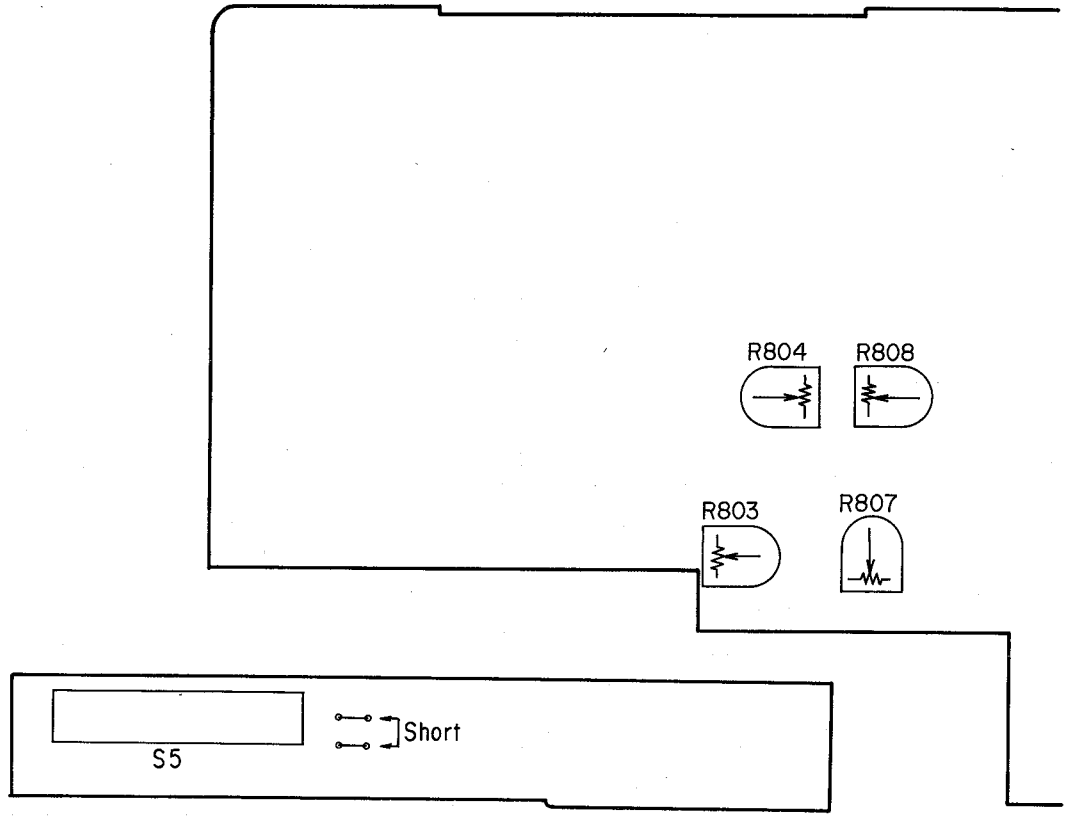


Figure 9

TAPE SPEED ADJUSTMENT
TEST TAPE ATT-111
1. PRELIMINARY WORK

1-1. Turn the power switch ON.
1-2. Place the select switch in TAPE position.
1-3. Connect the output from the headphone jack to the frequency counter.
1-4. Load the decks TAPE 1 and 2 with ATT-111s. (Use A side only.)

2. ADJUSTMENT PROCEDURES (Adjust in the steps below.)

2-1. Push FWD play switch of TAPE 1 and adjust R803 to obtain 3000 ± 20 Hz.
2-2. After adjustment is completed, stop the deck.
2-3. Push FWD play switch of TAPE 2 and adjust R804 for the counter to read within +0 Hz and −30 Hz from the value obtained in the adjsutment (2-1).
2-4. After adjustment is completed, stop the deck.
2-5. Short-circuit the jumper wire with other wire.
2-6. Push FWD play switch to TAPE 1 and adjust R807 to obtain 6000 ± 40 Hz.
2-7. After adjustment is completed, stop the deck.
2-8. Push FWD play switch of TAPE 2 and adjust R808 for the counter to read within +0 Hz and −60 Hz from the value obtained in the adjustment (2-1).
2-9. After adjustment is completed, stop the deck.

CAUTION:

1. The test should be performed with the test tapes wound at the same position (diameter).
2. Proceed the adjustments with the set positioned vertically. If not, tape speed will lowers.
3. Stabilized power source DC 12V should be used.
4. Before the adjustments, temporarily turn four semi-fixed resistors twice from minimum to maximum and vice versa to prevent the speed deviation due to instability of the semi-fixed resistors.
5. When making measurement, use the same tape to prevent speed difference (between different cassettes if used).

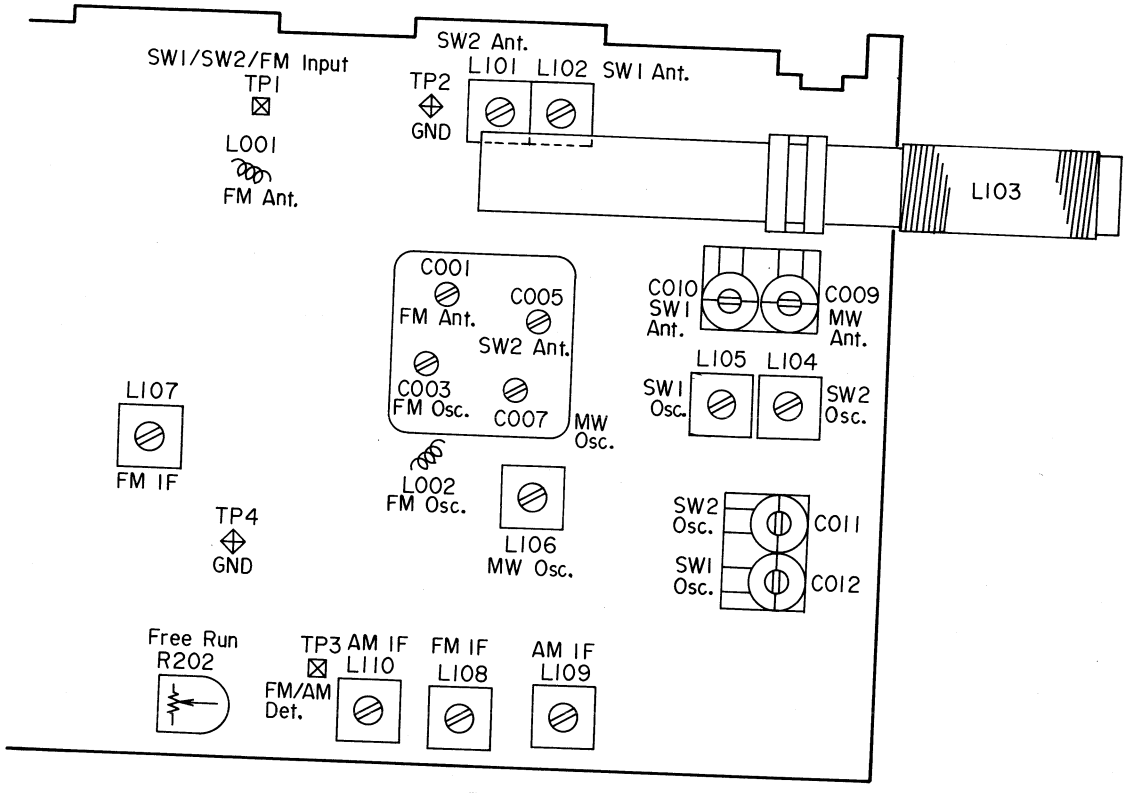


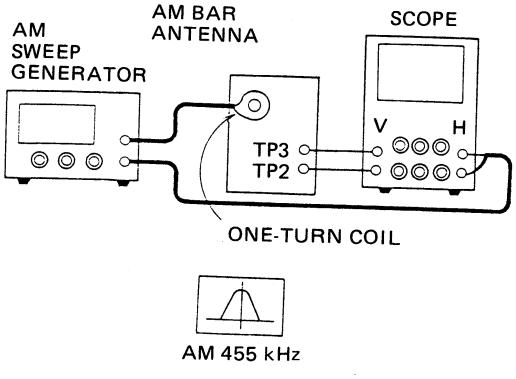
Figure 10

TEST EQUIPMENT

1. Signal generator with a frequency range of at least from 450 kHz to 23 MHz AM.
2. Oscilloscope with a side range amplifier of approximately 100 kHz.
3. Test loop – a coil of any size wire, one turn or more. (MW)
4. A 30 ohm dummy antenna. (SW1, SW2)
5. VTVM

AM ALIGNMENT

1. Turn on the AM signal generator and the VTVM allowing a fifteen-minute warm-up period.
2. Using the test loop across the output of the signal generator, inductively connect the signal generator to the radio.
3. Connect the VTVM across the voice coil or the headphone jack.
4. Set signal generator frequency as listed in ALIGNMENT CHART and maintain a sufficient output level to provide an indication on VTVM.
5. Set volume control at mid-position.
6. Proceed as outlined in the IF-MW, SW1 and SW2 ALIGNMENT CHART.



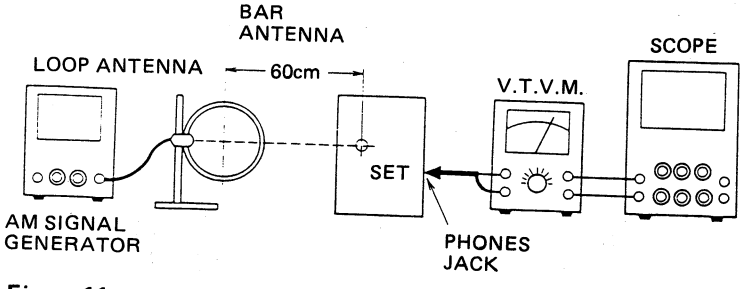


Figure 11

Note: 1. Use a screwdriver with plastic grip for all adjustments.
2. Standard test frequency 400 Hz and modulation 30% for AM.
3. Standard test frequency 400 Hz and deviation 22.5 kHz for FM.

MW ALIGNMENT CHART

Band	Step	Signal Generator Frequency	Radio Dial Setting	Adjustment	Remarks
IF	1	455 kHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	L109, L110	Adjust for maximum indication.
MW	2	510 kHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	OSC. Coil L106 (MW)	Adjust for maximum indication.
	3	1650 kHz	Tuning Gang Fully Clockwise (Highest Frequency)	OSC. Trim C007	Adjust for maximum indication.
	4	Repeat steps 2 and 3 as required.			
	5	600 kHz	Tune to Signal.	Ant. Coil L103 (MW)	Adjust for maximum indication.
	6	1400 kHz	Tune to Signal.	Ant. Trim. C010	Adjust for maximum indication.
	7	Repeat steps 5 and 6 as required.			

SW ALIGNMENT CHART

Band	Step	Signal Generator Frequency	Radio Dial Setting	Adjustment	Remarks
SW1	1	2.25 MHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	OSC. Coil L105 (SW1)	Adjust for maximum indication.
	2	7.7 MHz	Tuning Gang Fully Clockwise (Highest Frequency)	OSC. Trim. C012	Adjust for maximum indication.
	3	Repeat steps 1 and 2 as required.			
	4	3 MHz	Tune to Signal.	Ant. Coil L102 (SW1)	Adjust for maximum indication.
	5	7 MHz	Tune to Signal.	Ant. Trim. C009	Adjust for maximum indication.
	6	Repeat steps 4 and 5 as required.			
SW2	1	7.35 MHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	OSC. Coil L104 (SW2)	Adjust for maximum indication.
	2	22.5 MHz	Tuning Gang Fully Clockwise (Highest Frequency)	OSC. Trim. C011	Adjust for maximum indication.
	3	Repeat steps 1 and 2 as required.			
	4	9 MHz	Tune to Signal.	Ant. Coil L101 (SW2)	Adjust for maximum indication.
	5	20 MHz	Tune to Signal.	Ant. Trim. C005	Adjust for maximum indication.
	6	Repeat steps 4 and 5 as required.			

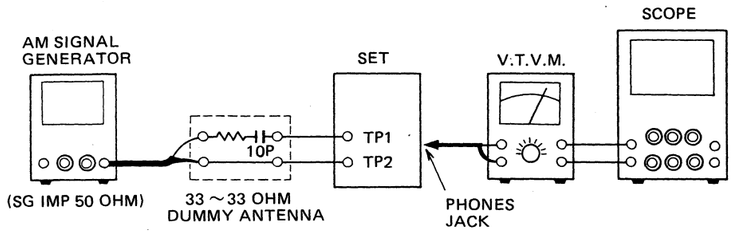


Figure 12

FM-IF ALIGNMENT

1. Set the select switch to FM position.
2. Turn on both sweep generator and oscilloscope, and allow a fifteen-minute warm-up period.
3. Connect the RF SWEEP SIGNAL OUTPUT from the signal generator through the loop antenna to the receiver.
4. Connect the oscilloscope vertical input directly to the test point TP3 and connect the shielded lead to the test point TP2 or chassis ground.
5. Connect the SWEEP VOLTAGE OUTPUT of the sweep generator to the oscilloscope.
6. Proceed as outlined in the FM-IF ALIGNMENT CHART.

FM-IF ALIGNMENT CHART

Step	Signal coupling	Equip.	Tuning	Connection	Adjust. point	Pattern
1	Connect sweep generator output to a three-turn loop antenna of 10 cm diameter.	Sweep generator of 10.7 MHz center freq. with 10.7 MHz marker.	Tuning Knob fully counter-clockwise (Lowest Frequency.)	Set scope for connecting output signal from TUN OUT to vertical axis of scope "V" and sweep generator output to horizontal axis "H".	L107 L108	Turn the IF Transformer L108 fully counterclockwise to obtain a single peak. Adjust coil L107 in order until the best single peak is obtained. Figure 14. Finally turn the coil L108 to obtain S curve. See Figure 15.

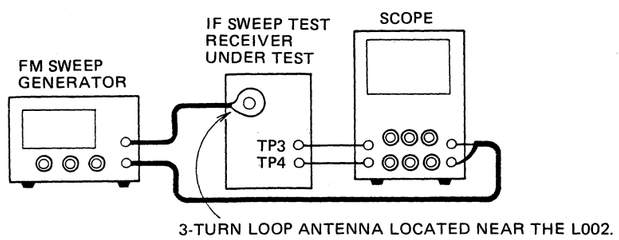


Figure 13

Figure 14

Figure 15

FM-RF ALIGNMENT

1. Turn on the signal generator and the VTVM, and allow a fifteen-minute warm-up period.
2. Connect the signal generator output through a 75 ohm dummy antenna across FM ANT.
3. Connect the VTVM across the voice coil.
4. Set the volume control to mid-position.
5. Adjust the signal generator frequency as indicated in FM-RF ALIGNMENT CHART, and maintain a sufficient signal output level to provide a measurable indication.
6. Proceed as outlined in the FM-RF ALIGNMENT CHART.

FM-RF ALIGNMENT CHART

Step	Signal Generator	Radio Dial Setting	Adjustment	Remarks
1	87.3 MHz	Tuning Knob Fully Counter-clockwise (Lowest Frequency)	OSC. Coil L002	Adjust for maximum output indication.
2	109 MHz	Tuning Knob Fully Clockwise (Highest Frequency)	OSC. Trim. C003	Adjust for maximum output indication.
3	Repeat steps 1 and 2 as required.			
4	90 MHz	Tune to signal	Ant. Coil L001	Adjust for maximum output indication.
5	106 MHz		Ant. Trim. C001	
6	Repeat steps 4 and 5 as required.			

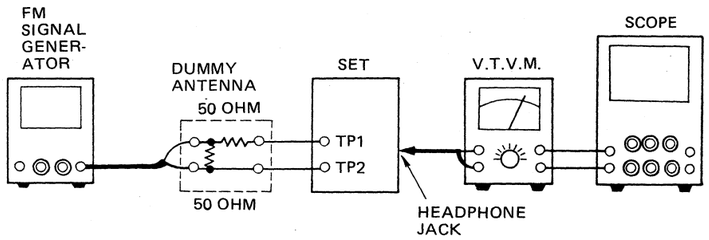


Figure 16

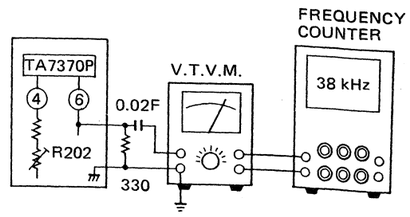


Figure 17

FREE RUN FREQUENCY ALIGNMENT

Adjust R202 under no signal condition so as to obtain 38 kHz ± 75 Hz.

AUTO REVERSE SYSTEM

A 6.3 kHz standard tape must be used for this adjustment. Connect a VTVM or an oscilloscope to the PHONES jack and adjust the forward azimuth and the reverse one by using a phillips screwdriver to maintain the maximum output voltage.

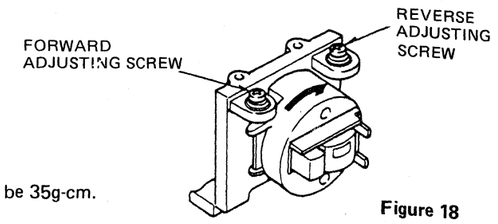
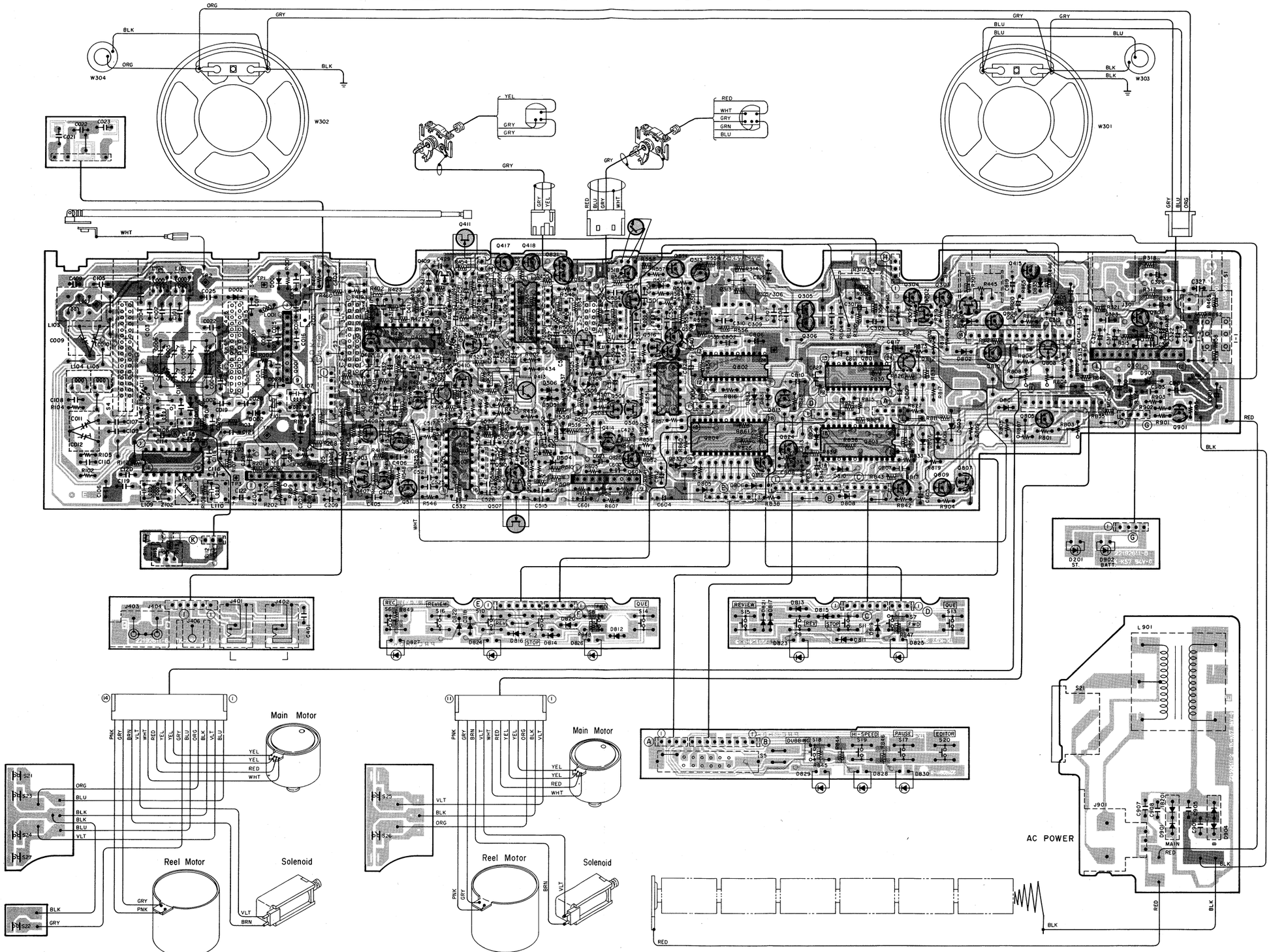


Figure 18

TAKE-UP/SUPPLY REEL TENSION

1. Insert cassette torque meter.
2. Press PLAY button and read torque meter. Torque should be 35g-cm.

6-1. ELECTRICAL PARTS LOCATIONS



6-2. ELECTRICAL PARTS LOCATIONS

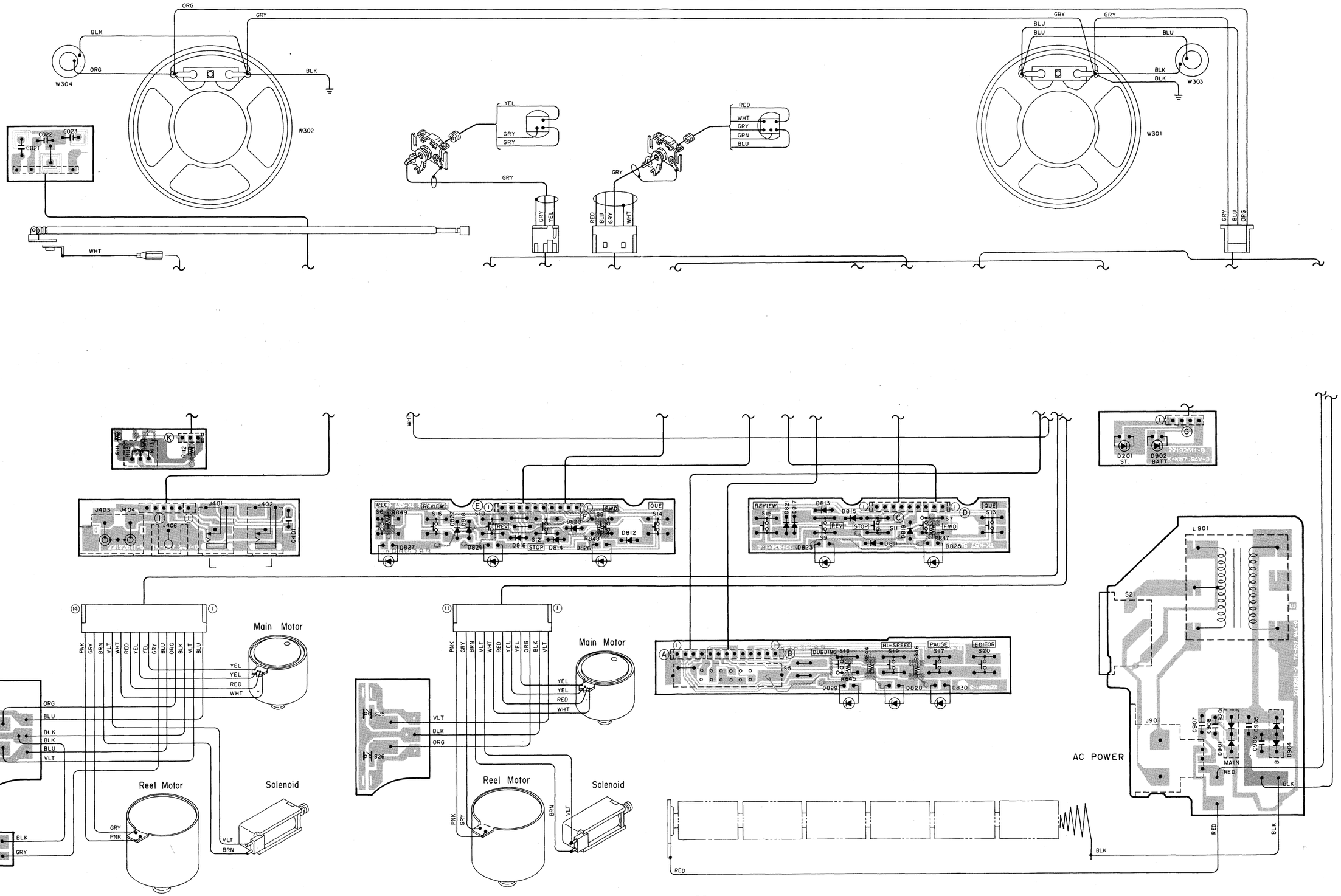


Figure 20

6-3. ELECTRICAL PARTS LOCATIONS

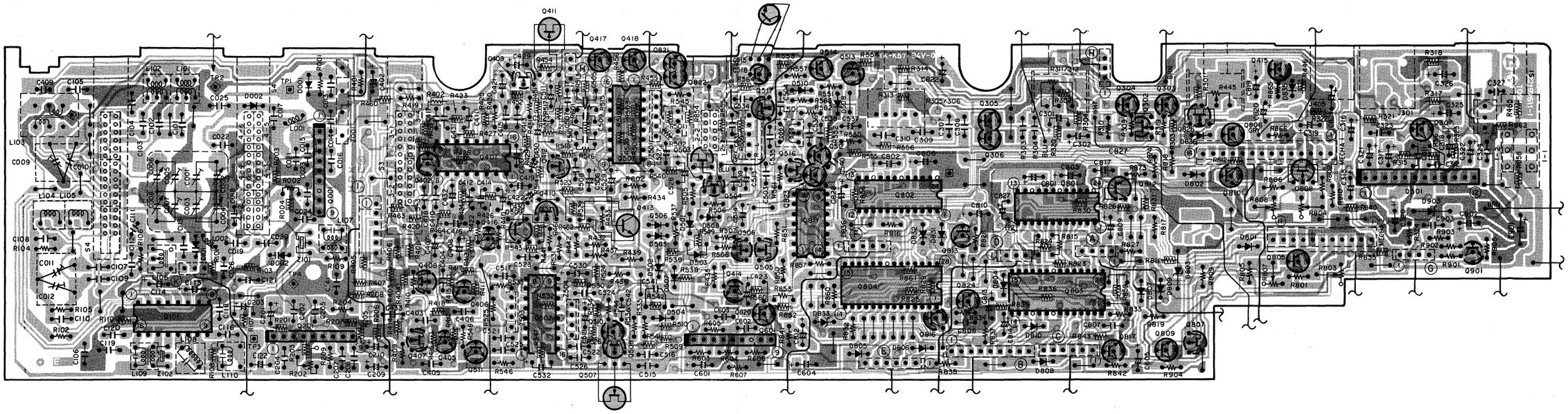


Figure 21

Q001

	FM
1	0.9V
2	1.6V
3	5.0V
4	1.6V
5	0V
6	3.8V
7	3.1V
8	3.8V
9	3.8V

Q201

	FM	AM
1	0.2V	0.2V
2	4.7V	5.5V
3	5.3V	6.1V
4	0.7V	0.9V
5	0V	0V
6	5.4V	5.5V
7	4.8V	6.1V
8	1.0V	1.0V
9	1.0V	1.0V

Q101

		1	2	3	4	5	6	7	8
RADIO	FM	0.1V	0.1V	3.8V	1.4V	1.4V	0.5V	0V	0V
	AM	1.0V	1.0V	0.1V	1.5V	1.5V	0.5V	0V	0V
		9	10	11	12	13	14	15	16
	FM	1.0V	5.3V	5.3V	5.3V	1.2V	1.2V	1.2V	5.3V
RADIO	AM	1.4V	6.2V	6.2V	6.2V	1.2V	1.2V	1.5V	6.2V

Q301

1	2	3	4	5	6
8.6V	4.6V	5.1V	0.6V	0V	0V
7	8	9	10	11	12
0V	0.6V	0V	4.5V	8.6V	9.0V

Q302

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
D	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V
G	0V	0V	0V	0V	0V	0V	0V	0V
S	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V

Q303, 304

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V
C	6.9V	6.9V	6.9V	6.9V	6.9V	6.9V	6.9V	6.9V
B	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V

Q305, 306

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0.7V	0.7V
C	0V	0V	0V	0V	0V	0V	0V	0V
B	0V	0V	0V	0V	0V	0V	0V	0V

Q307

	MONO	ST	WIDE
E	0V	0V	0.1V
C	0V	0V	0.1V
B	0V	0V	0.7V

Q401

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
1	0V	0V	0V	0V	0V	0V	0V	0V
2	6.7V	6.7V	6.7V	6.7V	6.7V	6.7V	6.7V	6.7V
3	0V	0V	0V	0V	0V	0V	0V	0V
4	2.6V	2.6V	2.6V	2.6V	2.6V	2.6V	2.6V	2.6V
5	1.3V	1.3V	1.3V	1.3V	1.3V	1.3V	1.3V	1.3V
6	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V
7	0V	0V	0V	0V	0V	0V	0V	0V
8	1.0V	1.0V	1.0V	1.0V	1.0V	1.0V	1.0V	1.0V
9	0V	0V	0V	0V	0V	0V	0V	0V
10	0V	0V	0V	0V	0V	0V	0V	0V
11	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V
12	1.3V	1.3V	1.3V	1.3V	1.3V	1.3V	1.3V	1.3V
13	2.5V	2.5V	2.5V	2.5V	2.5V	2.5V	2.5V	2.5V
14	0V	0V	0V	0V	0V	0V	0V	0V
15	0V	0V	0V	0V	0V	0V	0V	0V
16	6.6V	6.6V	6.6V	6.6V	6.6V	6.6V	6.6V	6.6V

Q402

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	0.9V	0.9V	0.9V	0.9V	0.9V	0.9V	0.9V	0.9V
B	0V	0V	0V	0V	0V	0V	0.4V	0.4V

Q405, 406

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	0V	0V	0V	0V	0V	0V	0V	0V
B	0V	0V	0V	0V	0V	0V	0V	0V

Q407, 408

D	0V
G	0V
S	0V

Q516

D	0V
G	0V
S	0V

Q409, 410

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
D	2.9V	2.9V	2.9V	2.9V	1.0V	1.0V	2.9V	2.9V
G	3.3V	3.3V	3.3V	3.3V	0V	0V	3.3V	3.3V
S	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V

Q411, 412

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
D	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V
G	0V	0V	0V	0V	3.4V	3.4V	0V	0V
S	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V

Q413, 414

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REV	
					FOR	REV	FOR	REV
E	4.9V	4.9V	4.9V	4.9V	0V	0V	4.7V	4.7V
C	4.9V	4.9V	4.9V	4.9V	0V	0V	4.7V	4.7V
B	0V	0V	0V	0V	0.6V	0.6V	0V	0V

Q415

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REV	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
B	0.6V	0.6V	0.6V	0.6V	0.6V	0.6V	0.6V	0.6V

Q418

	PHONO	RADIO			TAPE			
		TV	FM	AM	PLAY		REV	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	6.9V	6.9V	6.7V	6.7V
C	0V	0V	0V	0V	0V	0V	6.6V	6.6V
B	0V	0V	0V	0V	6.3V	6.3V	6.0V	6.0V

Q419

	PHONO	RADIO			TAPE			
		TV	FM	AM	PLAY		REV	
					FOR	REV	FOR	REV
E	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V
C	5.4V	5.4V	5.4V	5.4V	5.4V	5.4V	5.4V	5.4V
B	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V

Q501

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
1	5.2V	5.2V	5.2V	5.2V	5.1V	5.1V	4.9V	4.9V
2	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V
3	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V
4	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V
5	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V
6	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V
7	0V	0V	0V	0V	0V	0V	1.5V	1.5V
8	0V	0V	0V	0V	0V	0V	0V	0V
9	0.9V	0.9V	0.9V	0.9V	0.9V	0.9V	0.4V	0.4V
10	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V
11	1.6V	1.6V	1.6V	1.6V	1.6V	1.6V	1.0V	1.0V
12	0V	0V	0V	0V	0V	0V	0V	0V
13	1.2V	1.2V	1.2V	1.2V	N 0.3V C 0.9V M 1.2V	N 0.3V C 0.9V M 1.2V	N 0.3V C 1.3V M 1.3V	N 0.3V C 1.3V M 1.3V
14	0V	0V	0V	0V	0V	0V	0V	0V
15	1.6V	1.6V	1.6V	1.6V	1.6V	1.6V	0.9V	0.9V
16	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V

Q502

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
1	6.6V	6.6V	6.6V	6.6V	6.6V	6.6V	6.6V	6.6V
2	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
3	0V	0V	0V	0V	0V	0V	0V	0V
4	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
5	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
6	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
7	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
8	0V	0V	0V	0V	0V	0V	0V	0V
9	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
10	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
11	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
12	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
13	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
14	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
15	6.8V	6.8V	6.8V	6.8V	6.8V	6.8V	6.8V	6.8V
16	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V

Q505, 506

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REV	
					FOR	REV	FOR	REV
D	1.0V	1.0V	1.0V	1.0V	1.0V	1.0V	2.9V	2.9V
G	0V	0V	0V	0V	0V	0V	0V	0V
S	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V

Q509, 510

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	0V	0V	0V	0V	0V	0V	0V	0V
B	0V	0V	0V	0V	0V	0V	0V	0V

Q511

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	6.8V	6.8V	6.8V	6.8V	6.8V	6.8V	6.8V	6.8V
B	0V	0V	0V	0V	0V	0V	0V	0V

Q512

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	N 0.1V C 0.2V M 0.3V	N 0.1V C 0.2V M 0.3V
C	0.6V	0.6V	0.6V	0.6V	N 0.2V C 0.4V M 0.6V	N 0.2V C 0.4V M 0.6V	N 2.6V C 3.8V M 5.1V	N 2.6V C 3.8V M 5.1V
B	0V	0V	0V	0V	N 0V C 0.3V M 0.5V	N 0V C 0.3V M 0.5V	N 0.8V C 0.9V M 1.0V	N 0.8V C 0.9V M 1.0V

Q513

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0.6V	0.6V	0.6V	0.6V	N 0.2V C 0.4V M 0.6V	N 0.2V C 0.4V M 0.6V	N 2.6V C 3.8V M 5.2V	N 2.6V C 3.8V M 5.2V
C	1.0V	1.0V	1.0V	1.0V	N 0V C 0.5V M 1.0V	N 0V C 0.5V M 1.0V	N 6.7V C 6.6V M 6.5V	N 6.7V C 6.6V M 6.5V
B	0.5V	0.5V	0.5V	0.5V	N 0V C 0.5V M 1.1V	N 0V C 0.5V M 1.1V	N 3.3V C 4.5V M 5.9V	N 3.3V C 4.5V M 5.9V

Q514

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	6.9V	6.9V	6.9V	6.9V	6.9V	6.9V	6.7V	6.7V
C	1.0V	1.0V	1.0V	1.0V	N 0V C 0.5V M 6.9V	N 0V C 0.5V M 6.9V	6.7V	6.7V
B	6.9V	6.9V	6.9V	6.9V	6.9V	6.9V	6.0V	6.0V

Q515

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	6.9V	6.9V	6.9V	6.9V	6.9V	6.9V	0V	0V
B	0V	0V	0V	0V	0V	0V	0.6V	0.6V

Q601

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
1	6.8V	6.8V	6.8V	6.8V	6.6V	6.6V	6.3V	6.3V
2	0.8V	0.8V	0.8V	0.8V	0.8V	0.8V	N 1.4V C 1.6V M 2.0V	N 1.4V C 1.6V M 2.0V
3	0.7V	0.7V	0.7V	0.7V	0.7V	0.7V	0.7V	0.7V
4	0.7V	0.7V	0.7V	0.7V	0.7V	0.7V	0.7V	0.7V
5	0V	0V	0V	0V	0V	0V	0V	0V
6	0.9V	0.9V	0.9V	0.9V	0.9V	0.9V	0.9V	0.9V
7	0V	0V	0V	0V	0V	0V	0V	0V
8	0V	0V	0V	0V	0V	0V	0V	0V
9	6.8V	6.8V	6.8V	6.8V	6.6V	6.6V	6.3V	6.3V

Q801, 802

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
1	1.8V	1.8V	1.8V	1.8V	1.8V	1.8V	1.8V	1.8V
2	0V	0V	0V	0V	0V	0V	0V	0V
3	0V	0V	0V	0V	6.0V	0V	6.0V	0V
4	0V	0V	0V	0V	0V	6.0V	0V	5.6V
5	0V	0V	0V	0V	0V	0V	0V	0V
6	0V	0V	0V	0V	6.0V	6.0V	5.0V	5.0V
7	7.8V	7.8V	7.8V	7.8V	0.8V	0.8V	0.8V	0.8V
8	9.0V	9.0V	9.0V	9.0V	6.8V	6.8V	6.8V	6.8V
9	8.4V	8.4V	8.4V	8.4V	0.7V	0.7V	0.7V	0.7V
10	0V	0V	0V	0V	0V	0V	0V	0V
11	0V	0V	0V	0V	0V	0V	0V	0V
12	0.3V	0.3V	0.3V	0.3V	0.1V	2.6V	0.1V	2.6V
13	0.4V	0.4V	0.4V	0.4V	0.7V	0.7V	0.7V	0.7V
14	0.4V	0.4V	0.4V	0.4V	2.6V	0.1V	2.6V	0.1V
15	0V	0V	0V	0V	0V	0V	0V	0V
16	8.6V	8.6V	8.6V	8.6V	8.6V	8.6V	8.6V	8.6V
17	8.9V	8.9V	8.9V	8.9V	8.9V	8.9V	8.9V	8.9V
18	3.9V	3.9V	3.9V	3.9V	3.9V	3.9V	3.9V	3.9V
19	0V	0V	0V	0V	0V	0V	0V	0V
20	0.1V	0.1V	0.1V	0.1V	0.1V	0.1V	0.1V	0.1V
21	3.9V	3.9V	3.9V	3.9V	3.9V	3.9V	3.9V	3.9V
22	0V	0V	0V	0V	0V	0V	0V	0V
23	2.1V	2.1V	2.1V	2.1V	2.1V	2.1V	2.1V	2.1V
24	0V	0V	0V	0V	0V	0V	0V	0V

Q805, 806

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	9.0V	9.0V	9.0V	9.0V	9.0V	9.0V	9.0V	9.0V
C	8.9V	8.9V	8.9V	8.9V	8.9V	8.9V	8.9V	8.9V
B	8.2V	8.2V	8.2V	8.2V	8.2V	8.2V	8.2V	8.2V

Q807, 808

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
D	2.2V	2.2V	2.2V	2.2V	8.4V	8.4V	8.4V	8.4V
G	7.3V	7.3V	7.3V	7.3V	7.3V	7.3V	7.3V	7.3V
S	8.5V	8.5V	8.5V	8.5V	8.5V	8.5V	8.5V	8.5V

Q809, 810

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	2.7V	2.7V	2.7V	2.7V	7.3V	7.3V	7.3V	7.3V
B	0V	0V	0V	0V	0V	0V	0V	0V

Q812

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	6.8V	6.8V	6.8V	6.8V	6.6V	6.6V	6.3V	6.3V
C	0V	0V	0V	0V	0V	0V	0V	0V
B	6.7V	6.7V	6.7V	6.7V	6.6V	6.6V	6.3V	6.3V

Q813

E	0V
C	0V
B	0V

Q816

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	0.1V	0.1V	0.1V	0.1V	0V	0V	0V	0V
B	0.6V	0.6V	0.6V	0.6V	0.6V	0.6V	0.6V	0.6V

Q817

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	6.8V	6.8V	6.8V	6.8V	6.6V	6.6V	6.3V	6.3V
B	0V	0V	0V	0V	0V	0V	0V	0V

Q820

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	4.9V	4.9V	4.9V	4.9V	N 4.3V C 4.6V M 4.7V	N 4.3V C 4.6V M 4.7V	N 4.1V C 4.5V M 4.6V	N 4.1V C 4.5V M 4.6V
B	0V	0V	0V	0V	0V	0V	0V	0V

Q821, 822

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	0V	0V	0V	0V	6.3V	6.3V	0V	0V
B	0V	0V	0V	0V	0V	0V	0V	0V

Q823

E	0V
C	0V
B	0V

Q824

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	6.7V	6.7V	6.7V	6.7V	6.6V	6.6V	6.2V	6.2V
B	0V	0V	0V	0V	0V	0V	0.3V	0.3V

Q825, 826

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	8.4V	8.4V	8.4V	8.4V	0.7V	0.7V	0.7V	0.7V
B	0.5V	0.5V	0.5V	0.5V	0V	0V	0V	0V

Q827, 828

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	0V	0V	0V	0V	0V	0V	0V	0V
B	0V	0V	0V	0V	5.9V	0V	5.6V	0V

Q901

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	7.0V	7.0V	7.0V	7.0V	7.0V	7.0V	7.0V	7.0V
C	9.0V	9.0V	9.0V	9.0V	9.0V	9.0V	9.0V	9.0V
B	7.6V	7.6V	7.6V	7.6V	7.6V	7.6V	7.6V	7.6V

Figure 22

Q001

	FM
1	0.9V
2	1.6V
3	5.0V
4	1.6V
5	0V
6	3.8V
7	3.1V
8	3.8V
9	3.8V

Q201

	FM	AM
1	0.2V	0.2V
2	4.7V	5.5V
3	5.3V	6.1V
4	0.7V	0.9V
5	0V	0V
6	5.4V	5.5V
7	4.8V	6.1V
8	1.0V	1.0V
9	1.0V	1.0V

Q101

		1	2	3	4	5	6	7	8
RADIO	FM	0.1V	0.1V	3.8V	1.4V	1.4V	0.5V	0V	0V
	AM	1.0V	1.0V	0.1V	1.5V	1.5V	0.5V	0V	0V
		9	10	11	12	13	14	15	16
RADIO	FM	1.0V	5.3V	5.3V	5.3V	1.2V	1.2V	1.2V	5.3V
	AM	1.4V	6.2V	6.2V	6.2V	1.2V	1.2V	1.5V	6.2V

Q301

+	2	3	4	5	6
8.6V	4.6V	5.1V	0.6V	0V	0V
7	8	9	10	11	12
0V	0.6V	0V	4.5V	8.6V	9.0V

Q302

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
D	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V
G	0V	0V	0V	0V	0V	0V	0V	0V
S	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V

Q303,304

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V
C	6.9V	6.9V	6.9V	6.9V	6.9V	6.9V	6.9V	6.9V
B	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V

Q305,306

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0.7V	0.7V
C	0V	0V	0V	0V	0V	0V	0V	0V
B	0V	0V	0V	0V	0V	0V	0V	0V

Q307

	MONO	ST	WIDE
E	0V	0V	0.1V
C	0V	0V	0.1V
B	0V	0V	0.7V

Q401

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
1	0V	0V	0V	0V	0V	0V	0V	0V
2	6.7V	6.7V	6.7V	6.7V	6.7V	6.7V	6.7V	6.7V
3	0V	0V	0V	0V	0V	0V	0V	0V
4	2.6V	2.6V	2.6V	2.6V	2.6V	2.6V	2.6V	2.6V
5	1.3V	1.3V	1.3V	1.3V	1.3V	1.3V	1.3V	1.3V
6	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V
7	0V	0V	0V	0V	0V	0V	0V	0V
8	1.0V	1.0V	1.0V	1.0V	1.0V	1.0V	1.0V	1.0V
9	0V	0V	0V	0V	0V	0V	0V	0V
10	0V	0V	0V	0V	0V	0V	0V	0V
11	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V	1.2V
12	1.3V	1.3V	1.3V	1.3V	1.3V	1.3V	1.3V	1.3V
13	2.5V	2.5V	2.5V	2.5V	2.5V	2.5V	2.5V	2.5V
14	0V	0V	0V	0V	0V	0V	0V	0V
15	0V	0V	0V	0V	0V	0V	0V	0V
16	6.6V	6.6V	6.6V	6.6V	6.6V	6.6V	6.6V	6.6V

Q402

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	0.9V	0.9V	0.9V	0.9V	0.9V	0.9V	0.9V	0.9V
B	0V	0V	0V	0V	0V	0V	0.4V	0.4V

Q405,406

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	0V	0V	0V	0V	0V	0V	0V	0V
B	0V	0V	0V	0V	0V	0V	0V	0V

Q407,408

D	0V
G	0V
S	0V

Q516

D	0V
G	0V
S	0V

Q409,410

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
D	2.9V	2.9V	2.9V	2.9V	1.0V	1.0V	2.9V	2.9V
G	3.3V	3.3V	3.3V	3.3V	0V	0V	3.3V	3.3V
S	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V

Q411,412

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
D	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V
G	0V	0V	0V	0V	3.4V	3.4V	0V	0V
S	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V

Q413,414

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REV	
					FOR	REV	FOR	REV
E	4.9V	4.9V	4.9V	4.9V	0V	0V	4.7V	4.7V
C	4.9V	4.9V	4.9V	4.9V	0V	0V	4.7V	4.7V
B	0V	0V	0V	0V	0.6V	0.6V	0V	0V

Q415

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REV	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
B	0.6V	0.6V	0.6V	0.6V	0.6V	0.6V	0.6V	0.6V

Q418

	PHONO	RADIO			TAPE			
		TV	FM	AM	PLAY		REV	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	6.9V	6.9V	6.7V	6.7V
C	0V	0V	0V	0V	0V	0V	6.6V	6.6V
B	0V	0V	0V	0V	6.3V	6.3V	6.0V	6.0V

Q419

	PHONO	RADIO			TAPE			
		TV	FM	AM	PLAY		REV	
					FOR	REV	FOR	REV
E	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V	2.3V
C	5.4V	5.4V	5.4V	5.4V	5.4V	5.4V	5.4V	5.4V
B	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V

Q501

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
1	5.2V	5.2V	5.2V	5.2V	5.1V	5.1V	4.9V	4.9V
2	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V
3	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V
4	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V
5	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V
6	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V
7	0V	0V	0V	0V	0V	0V	1.5V	1.5V
8	0V	0V	0V	0V	0V	0V	0V	0V
9	0.9V	0.9V	0.9V	0.9V	0.9V	0.9V	0.4V	0.4V
10	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V
11	1.6V	1.6V	1.6V	1.6V	1.6V	1.6V	1.0V	1.0V
12	0V	0V	0V	0V	0V	0V	0V	0V
13	1.2V	1.2V	1.2V	1.2V	N 0.3V C 0.9V M 1.2V	N 0.3V C 0.9V M 1.2V	N 0.3V C 1.3V M 1.3V	N 0.3V C 1.3V M 1.3V
14	0V	0V	0V	0V	0V	0V	0V	0V
15	1.6V	1.6V	1.6V	1.6V	1.6V	1.6V	0.9V	0.9V
16	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V	1.5V

Q502

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
1	6.6V	6.6V	6.6V	6.6V	6.6V	6.6V	6.6V	6.6V
2	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
3	0V	0V	0V	0V	0V	0V	0V	0V
4	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
5	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
6	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
7	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
8	0V	0V	0V	0V	0V	0V	0V	0V
9	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
10	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
11	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
12	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
13	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
14	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V
15	6.8V	6.8V	6.8V	6.8V	6.8V	6.8V	6.8V	6.8V
16	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V	2.8V

Q505,506

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REV	
					FOR	REV	FOR	REV
D	1.0V	1.0V	1.0V	1.0V	1.0V	1.0V	2.9V	2.9V
G	0V	0V	0V	0V	0V	0V	0V	0V
S	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V	2.9V

Q509,510

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	0V	0V	0V	0V	0V	0V	0V	0V
B	0V	0V	0V	0V	0V	0V	0V	0V

Q511

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	6.8V	6.8V	6.8V	6.8V	6.8V	6.8V	6.8V	6.8V
B	0V	0V	0V	0V	0V	0V	0V	0V

Q512

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	N 0.1V C 0.2V M 0.3V	N 0.1V C 0.2V M 0.3V
C	0.6V	0.6V	0.6V	0.6V	N 0.2V C 0.4V M 0.6V	N 0.2V C 0.4V M 0.6V	N 2.6V C 3.8V M 5.1V	N 2.6V C 3.8V M 5.1V
B	0V	0V	0V	0V	N 0V C 0.3V M 0.5V	N 0V C 0.3V M 0.5V	N 0.8V C 0.9V M 1.0V	N 0.8V C 0.9V M 1.0V

Q513

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0.6V	0.6V	0.6V	0.6V	N 0.2V C 0.4V M 0.6V	N 0.2V C 0.4V M 0.6V	N 2.6V C 3.8V M 5.2V	N 2.6V C 3.8V M 5.2V
C	1.0V	1.0V	1.0V	1.0V	N 0V C 0.5V M 1.0V	N 0V C 0.5V M 1.0V	N 6.7V C 6.6V M 6.5V	N 6.7V C 6.6V M 6.5V
B	0.5V	0.5V	0.5V	0.5V	N 0V C 0.5V M 1.1V	N 0V C 0.5V M 1.1V	N 3.3V C 4.5V M 5.9V	N 3.3V C 4.5V M 5.9V

Q514

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	6.9V	6.9V	6.9V	6.9V	6.9V	6.9V	6.7V	6.7V
C	1.0V	1.0V	1.0V	1.0V	N 0V M 6.9V	N 0V M 6.9V	6.7V	6.7V
B	6.9V	6.9V	6.9V	6.9V	6.9V	6.9V	6.0V	6.0V

Q515

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	6.9V	6.9V	6.9V	6.9V	6.9V	6.9V	0V	0V
B	0V	0V	0V	0V	0V	0V	0.6V	0.6V

Q601

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
1	6.8V	6.8V	6.8V	6.8V	6.6V	6.6V	6.3V	6.3V
2	0.8V	0.8V	0.8V	0.8V	0.8V	0.8V	N 1.4V C 1.6V M 2.0V	N 1.4V C 1.6V M 2.0V
3	0.7V	0.7V	0.7V	0.7V	0.7V	0.7V	0.7V	0.7V
4	0.7V	0.7V	0.7V	0.7V	0.7V	0.7V	0.7V	0.7V
5	0V	0V	0V	0V	0V	0V	0V	0V
6	0.9V	0.9V	0.9V	0.9V	0.9V	0.9V	0.9V	0.9V
7	0V	0V	0V	0V	0V	0V	0V	0V
8	0V	0V	0V	0V	0V	0V	0V	0V
9	6.8V	6.8V	6.8V	6.8V	6.6V	6.6V	6.3V	6.3V

Q801, 802

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
1	1.8V	1.8V	1.8V	1.8V	1.8V	1.8V	1.8V	1.8V
2	0V	0V	0V	0V	0V	0V	0V	0V
3	0V	0V	0V	0V	6.0V	0V	6.0V	0V
4	0V	0V	0V	0V	0V	6.0V	0V	5.6V
5	0V	0V	0V	0V	0V	0V	0V	0V
6	0V	0V	0V	0V	6.0V	6.0V	5.0V	5.0V
7	7.8V	7.8V	7.8V	7.8V	0.8V	0.8V	0.8V	0.8V
8	9.0V	9.0V	9.0V	9.0V	6.8V	6.8V	6.8V	6.8V
9	8.4V	8.4V	8.4V	8.4V	0.7V	0.7V	0.7V	0.7V
10	0V	0V	0V	0V	0V	0V	0V	0V
11	0V	0V	0V	0V	0V	0V	0V	0V
12	0.3V	0.3V	0.3V	0.3V	0.1V	2.6V	0.1V	2.6V
13	0.4V	0.4V	0.4V	0.4V	0.7V	0.7V	0.7V	0.7V
14	0.4V	0.4V	0.4V	0.4V	2.6V	0.1V	2.6V	0.1V
15	0V	0V	0V	0V	0V	0V	0V	0V
16	8.6V	8.6V	8.6V	8.6V	8.6V	8.6V	8.6V	8.6V
17	8.9V	8.9V	8.9V	8.9V	8.9V	8.9V	8.9V	8.9V
18	3.9V	3.9V	3.9V	3.9V	3.9V	3.9V	3.9V	3.9V
19	0V	0V	0V	0V	0V	0V	0V	0V
20	0.1V	0.1V	0.1V	0.1V	0.1V	0.1V	0.1V	0.1V
21	3.9V	3.9V	3.9V	3.9V	3.9V	3.9V	3.9V	3.9V
22	0V	0V	0V	0V	0V	0V	0V	0V
23	2.1V	2.1V	2.1V	2.1V	2.1V	2.1V	2.1V	2.1V
24	0V	0V	0V	0V	0V	0V	0V	0V

Q805, 806

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	9.0V	9.0V	9.0V	9.0V	9.0V	9.0V	9.0V	9.0V
C	8.9V	8.9V	8.9V	8.9V	8.9V	8.9V	8.9V	8.9V
B	8.2V	8.2V	8.2V	8.2V	8.2V	8.2V	8.2V	8.2V

Q807,808

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
D	2.2V	2.2V	2.2V	2.2V	8.4V	8.4V	8.4V	8.4V
G	7.3V	7.3V	7.3V	7.3V	7.3V	7.3V	7.3V	7.3V
S	8.5V	8.5V	8.5V	8.5V	8.5V	8.5V	8.5V	8.5V

Q809, 810

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	2.7V	2.7V	2.7V	2.7V	7.3V	7.3V	7.3V	7.3V
B	0V	0V	0V	0V	0V	0V	0V	0V

Q812

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	6.8V	6.8V	6.8V	6.8V	6.6V	6.6V	6.3V	6.3V
C	0V	0V	0V	0V	0V	0V	0V	0V
B	6.7V	6.7V	6.7V	6.7V	6.6V	6.6V	6.3V	6.3V

Q813

E	0V
C	0V
B	0V

Q816

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	0.1V	0.1V	0.1V	0.1V	0V	0V	0V	0V
B	0.6V	0.6V	0.6V	0.6V	0.6V	0.6V	0.6V	0.6V

Q817

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	6.8V	6.8V	6.8V	6.8V	6.6V	6.6V	6.3V	6.3V
B	0V	0V	0V	0V	0V	0V	0V	0V

Q820

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	4.9V	4.9V	4.9V	4.9V	N 4.3V C 4.6V M 4.7V	N 4.3V C 4.6V M 4.7V	N 4.1V C 4.5V M 4.6V	N 4.1V C 4.5V M 4.6V
B	0V	0V	0V	0V	0V	0V	0V	0V

Q821, 822

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	0V	0V	0V	0V	6.3V	6.3V	0V	0V
B	0V	0V	0V	0V	0V	0V	0V	0V

Q823

E	0V
C	0V
B	0V

Q824

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	6.7V	6.7V	6.7V	6.7V	6.6V	6.6V	6.2V	6.2V
B	0V	0V	0V	0V	0V	0V	0.3V	0.3V

Q825, 826

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	8.4V	8.4V	8.4V	8.4V	0.7V	0.7V	0.7V	0.7V
B	0.5V	0.5V	0.5V	0.5V	0V	0V	0V	0V

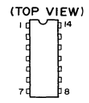
Q827, 828

	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	0V	0V	0V	0V	0V	0V	0V	0V
C	0V	0V	0V	0V	0V	0V	0V	0V
B	0V	0V	0V	0V	5.9V	0V	5.6V	0V

Q901

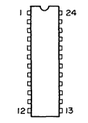
	PHONO	AUX	RADIO		TAPE			
			FM	AM	PLAY		REC	
					FOR	REV	FOR	REV
E	7.0V	7.0V	7.0V	7.0V	7.0V	7.0V	7.0V	7.0V
C	9.0V	9.0V	9.0V	9.0V	9.0V	9.0V	9.0V	9.0V
B	7.6V	7.6V	7.6V	7.6V	7.6V	7.6V	7.6V	7.6V

(TOP VIEW)

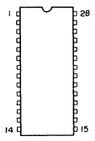


TC4081BP

TA7668BP
TA7705P
TA7739P
TA7757P

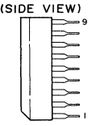


TA7780N

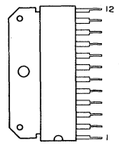


TC9310N-062
TC9310N-063

(SIDE VIEW)



TA7341P
TA7358P
TA7370P



TA7233P

2SA562
2SA950
2SC1959
2SC2878

2SC2655

2SA1048
2SC2458

2SK118

Figure 23

7. SCHEMATIC DIAGRAM

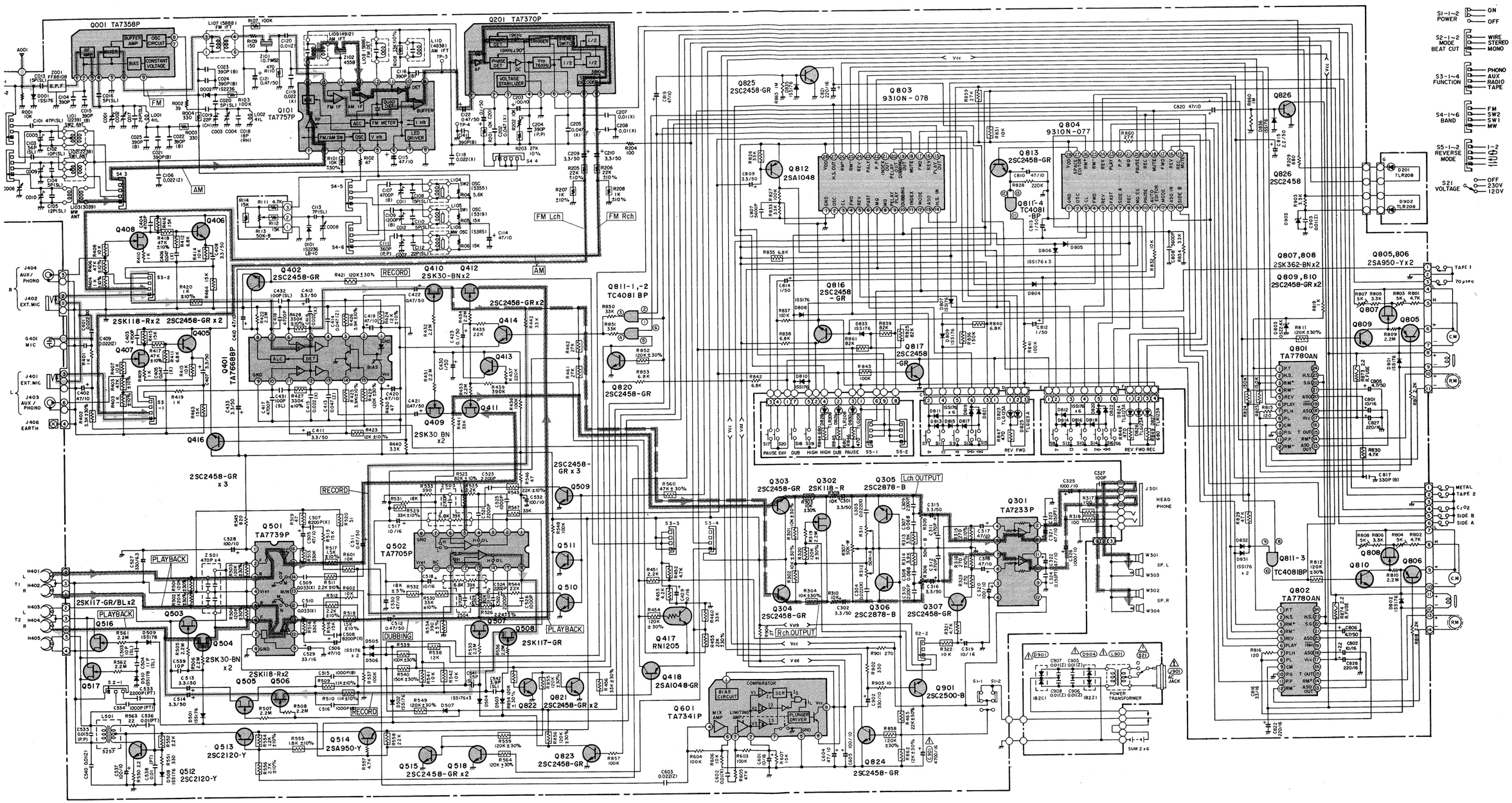


Figure 24

CAUTION:
The ⚠ mark, the symbol No. circled with oval in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

8-1. MECHANISM EXPLODED VIEW (TAPE1)

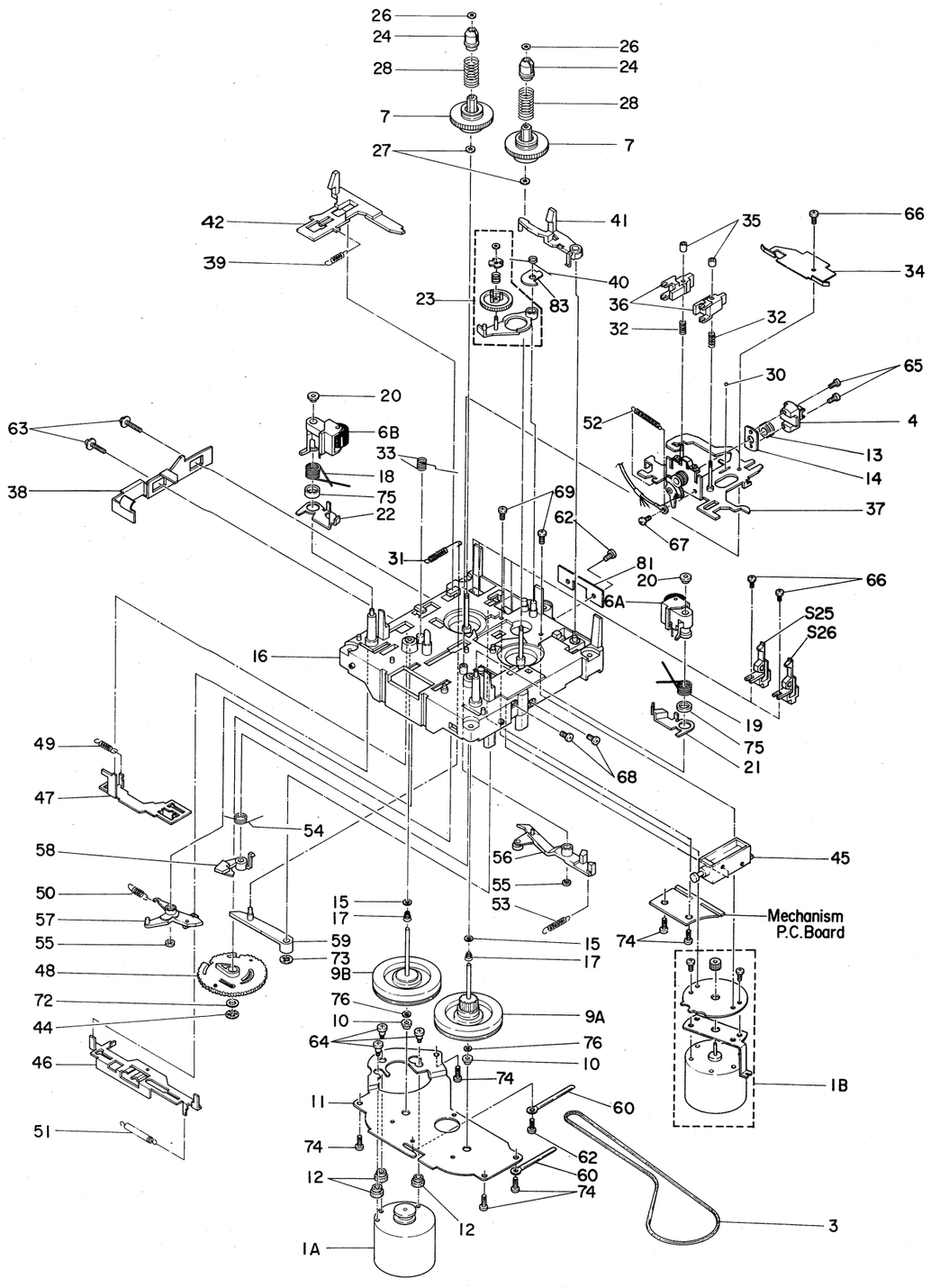


Figure 25

NOTE: Parts excluded in the parts list are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

8-2. MECHANISM EXPLODED VIEW (TAPE2)

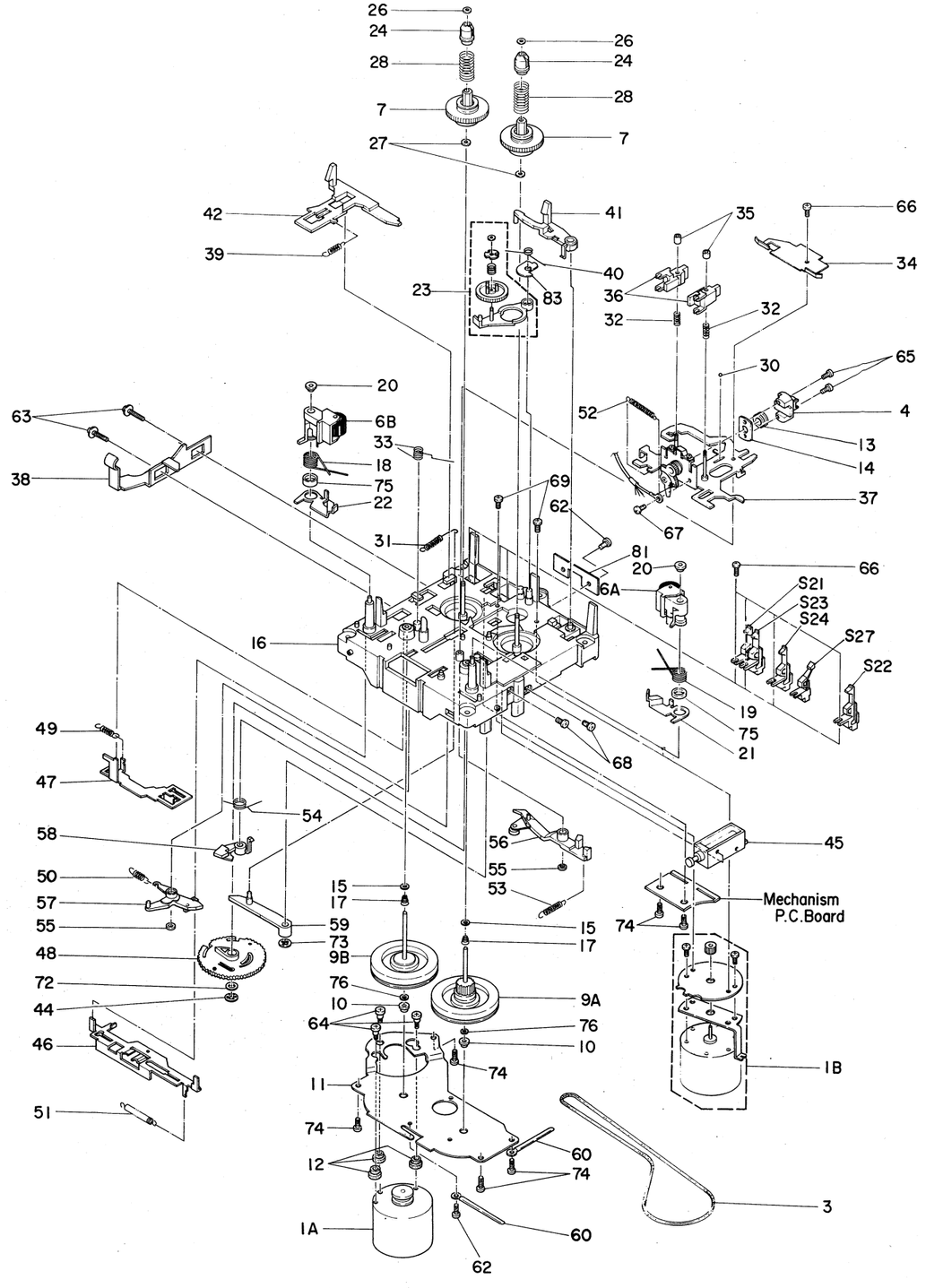


Figure 26

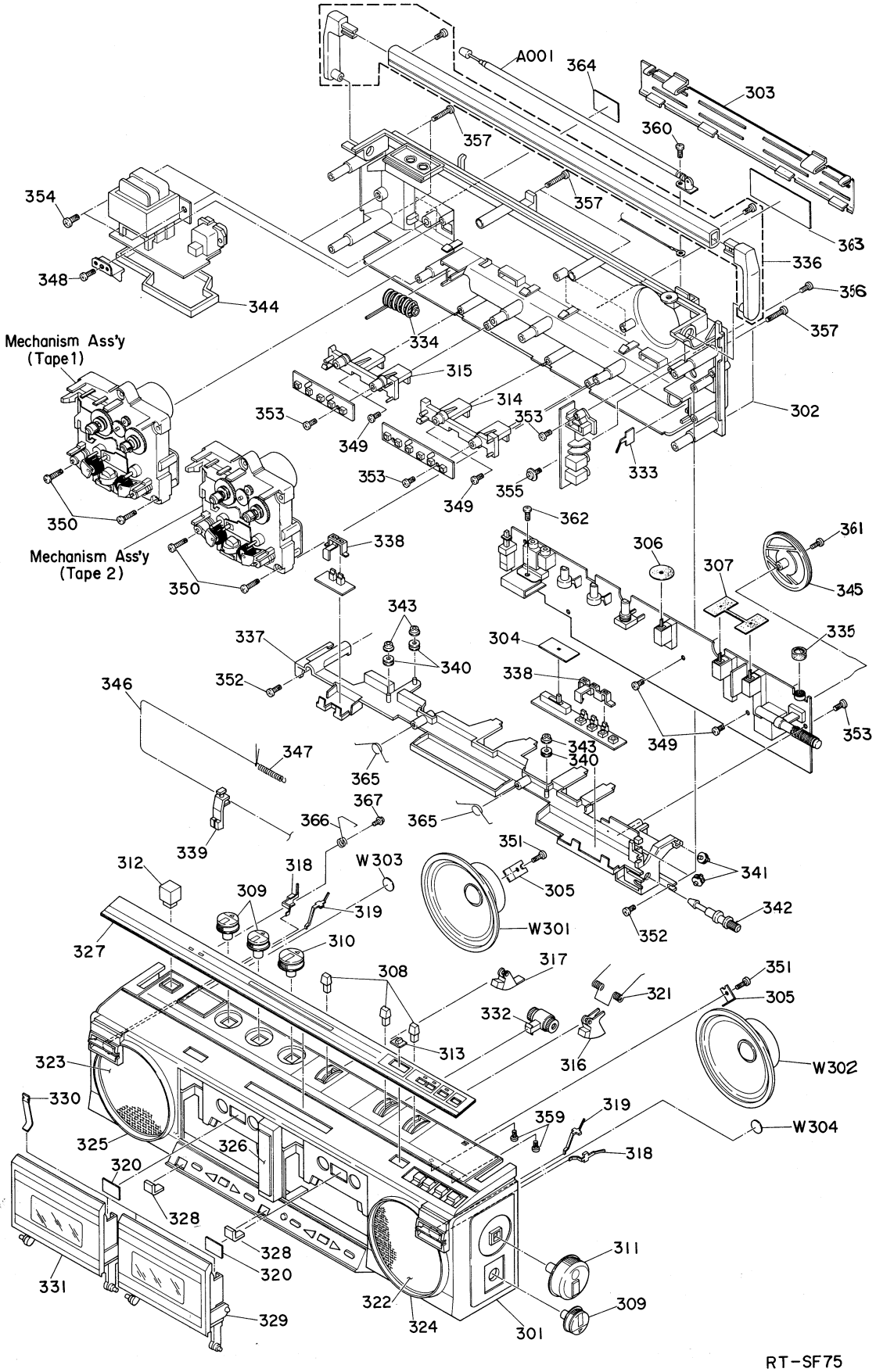
NOTE: Parts excluded in the parts list are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

9. MECHANISM PARTS LIST

Symbol No.	Part No.	Description
1A	25791825	Motor Ass'y, Main
1B	25791903	Motor Ass'y, Reel
3	25759037	Belt, Drive
4	22217463	Head, Record/Playback, Tape 1
4	22217450	Head, Record/Playback/ Erase Tape 2
6A	25717600	Pressure Roller, Right
6B	25797022	Pressure Roller, Left
7	25754483	Reel Drum
9	25797048	Flywheel Ass'y, R/L
10	25725456	Holder, Flywheel
12	25761238	Cushion
13	25761450	Cushion, Motor
14	25761481	Cushion
15	25764486	Washer
16	25791780	Chassis Ass'y, Mechanism
17	25777424	Spring
18	25778190	Spring, Pressure Roller, Left
19	25778198	Spring, Pressure Roller, Right
20	25783226	Bushing
23	25756486	Transfer Gear Kit
24	25754436	Reel Collar
26	25766050	Washer
27	25766223	Washer
28	25777418	Spring
30	25757132	Steel Ball, 1.5mmd
31	25776721	Spring
32	25777404	Spring, Tape Guide
34	25779427	Spring
35	25783258	Nut, Adjustment
36	25783391	Tape Guide
37	25797037	Head Slider Ass'y
38	25749069	Slider, Sub Eject, Tape 1
38	25749070	Slider, Sub Eject, Tape 2
40	25778199	Spring
41	25784206	Lever
42	25784207	Slider
44	20798033	Ring
48	25756454	Cam Gear Ass'y
49	25776769	Spring, MQS
50	25776771	Spring, Reverse Lever
51	25776772	Spring, Reverse
52	25776773	Spring, Shift
53	25776793	Spring, Cam Lock
54	25778192	Spring, Play Lock
55	25783239	Bushing
56	25791835	Lever Ass'y, Cam Lock
57	25784192	Lever, Reverse
58	25784208	Lever, Play Lock
59	25784209	Lever, Play

Symbol No.	Part No.	Description
62	22707350	Screw, BID Hd. 2.6d x 5mml
63	22707825	Screw, PAN Hd. with Washer 2.6d x 8mml
64	22707429	Screw, Special, 2.6d x 6.7mml, Motor
65	22702173	Screw, PAN Hd. 1.4d x 6mml, BLK
66	22708040	Screw, BID Hd. Tapping 2d x 5mml
67	22707278	Screw, BID Hd. 2d x 3mml
68	22707475	Screw, BID Hd. 2.6d x 4mml
71	22701354	Screw, FLT Hd. 2d x 6mml
72	22703269	Washer, 3mmd
74	22707301	Screw, BID Hd. Tapping 2.6d x 8mml
75	25726762	Spacer
76	25766043	Washer
81	25734532	Stopper, Take-up Lever
86	25735280	Washer

10. CABINET EXPLODED VIEW



RT-SF75

Figure 27

NOTE: Parts excluded in the parts list are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

11. CABINET PARTS LIST

Symbol No.	Part No.	Description
301	25883925	Front Cabinet Ass'y, R
301	25883924	Front Cabinet Ass'y, K
302	25883928	Back Cabinet Ass'y, R
302	25883927	Back Cabinet Ass'y, K
303	25883699	Battery Cover Ass'y, R
303	25883829	Battery Cover Ass'y, K
304	25833560	Spacer
305	25846572	Retainer, Speaker
306	25857218	Cover, Switch
307	25857329	Cover, Switch
308	25886083	Knob, Lever
309	25886418	Knob, Tone
310	25886419	Knob, Volume
311	25886420	Knob, Tuning
312	25886429	Knob, Power
313	25886430	Knob, Slide Switch
314	25886446	Frame, P.C. Board, Right
315	25886457	Frame, P.C. Board, Left
316	22714374	Frame, Eject, Right
317	22714379	Frame, Eject, Left
320	25809217	Reflector, Tape Afterglow
321	25778204	Spring, Cassette Open
322	25823407	Net, Speaker, Right
323	25823408	Net, Speaker, Left
324	25884076	Ring, Speaker, Right
325	25884077	Ring, Speaker, Left
328	25886432	Knob, Eject
329	25883931	Cassette Cover Ass'y, Right, R
329	25883930	Cassette Cover Ass'y, Right, K
330	25864435	Spring, Cassette Cover
331	25883934	Cassette Cover Ass'y, Left, R
331	25883933	Cassette Cover Ass'y, Left, K
332	25883700	Damper Ass'y
333	22725271	Contact, Battery
334	22725272	Spring, Battery
335	25857022	Cushion, Built-in Mic.
336	25815276	Handle Ass'y, R
336	25815280	Handle Ass'y, K
337	22714373	Frame, Tuner
338	22714375	Frame, Top LED
339	22741475	Pointer
340	22742110	Pulley
341	22742287	Pulley with Shaft
342	22749253	Tuning Shaft
343	25783226	Bushing
344	25884078	Cover, Power Transformer
345	22742316	Drum, Dial

Symbol No.	Part No.	Description
346	22999222	Dial Cord, 0.5mmd
347	25776709	Spring, Dial Drum
348	22707802	Screw, BID Hd. Tapping 3d x 12mml
349	22707803	Screw, BID Hd. Tapping 3d x 12mml, RED
350	22707805	Screw, BID HD. Tapping 3d x 20mml
351	22707826	Screw, BID Hd. Tapping 3d x 10mml
352	22707843	Screw, Bid Hd. Tapping 3d x 16mml
353	22707844	Screw, BID Hd. Tapping 3d x 10mml
354	22708007	Screw, BID Hd. Tapping 4d x 10mml
355	22708048	Screw with Washer, PAN Hd. 3d x 10mml
356	22708184	Screw, BID Hd. Tapping 3d x 10mml, Plated Nickel
357	22708337	Screw, BID Hd. Tapping 3d x 35mml
358	22702199	Screw, BID Hd. Tapping 3d x 40mml
359	22708349	Screw, FLT Hd. Tapping 2.6d x 6mml
360	22708185	Screw, BID Hd. Tapping 3d x 12mml, Plated Nickel
361	22707473	Screw, BID Hd. 2.6d x 6mml
362	22707461	Screw, BID Hd. Tapping 3d x 6mml
363	25809184	Name Label
365	25775303	Spring, Dial Cord
366	25778259	Spring, Cassette
367	22701436	Screw, PAN Hd. with Washer Tapping, 3d x 8mml

12. PARTS LIST

CAUTION:
The ⚠ mark, the symbol No. circled with oval in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

Symbol No.	Part No.	Description
TRANSISTORS, ICS & DIODES		
Q001	B0325500	IC, TA7358P
Q101	B0358070	IC, TA7757P
Q201	B0325620	IC, TA7370P
Q301	B0319970	IC, TA7233P
Q302, 404, 407, 505, 506	A6041970	Transistor, 2SK118NEW-R
Q303, 304, 307, 402, 405, 406, 413, 414, 416, 509, 510, 511, 515, 809, 810, 813, 816, 817, 820, 821, 822, 823, 824, 825, 826	A6332440	Transistor, 2SC2458-GR
Q305, 306	A6342210	Transistor, 2SC2878-B
Q401	B0356695	IC, TA7668BP
Q409, 410, 411, 412, Q503, 504	A6048301	Transistor, 2SK30ATM-BN
Q417	B6002050	Transistor, RN1205
Q418	A6534440	Transistor, 2SA1048-GR
Q501	B0357890	IC, TA7739P
Q502	B0357320	IC, TA7705P
Q507, 508	A6041860	Transistor, 2SK117-GR
Q512, 513	A6321240	Transistor, 2SC2120-Y
Q514, 805, 806	A6532940	Transistor, 2SA950-Y
Q601	B0325320	IC, TA7341P
Q801, 802	22117631	IC, TA7780AN
Q803	22117644	IC, TC9310N-078
Q804	22117643	IC, TC9310N-077
Q807, 808	A6058491	Transistor, 2SK362-BN (JA)
Q811	B0470813	IC, TA4081BP
Q812	A6534440	Transistor, 2SA1048-GR
Q901	A6330425	Transistor, 2SC2500-B

Symbol No.	Part No.	Description
D001, 501 ∿ 508, 801, 802, 804 ∿ 806, 808 ∿ 822, 831 ∿ 833, 835, 836	A7160570	Diode, 1SS176
D002, 101	A7289000	Diode, 1S2236
D201, 828, 829, 902	A8603140	Diode, LED, TLR208
D823 ∿ 826	A8606151	Diode, LED, TLG123A
D830	A8606660	Diode, LED, TLG208
⚠ D901	A7682012	Diode, 1B2C1 (T)
D903	A7110041	Diode, Zener, 05Z5.1-Y
⚠ D904	A7682052	Diode, 1B2Z1 (T)
COILS & TRANSFORMERS		
L001	22294583	Coil, FM Antenna
L002	22294584	Coil, FM Oscillator
L101	22282239	Coil, SW_2 Antenna
L102	22282238	Coil, SW_1 Antenna
L103	22243039	Coil, Bar Antenna
L104	22285355	Coil, SW_2 Oscillator
L105	22285319	Coil, SW_1 Oscillator
L106	22245473	Coil, MW Oscillator
L107	22265888	IF Transformer, FM
L108	22265886	IF Transformer, FM
L109	22264912	IF Transformer, AM
L110	22264838	IF Transformer, AM
L501	22235257	Coil, Tape Bias Oscillator
⚠ L901	22224435	Power Transformer
ELECTRICAL PARTS		
⚠ S1 1-2	22196569	Switch, Push, Power ON/OFF
S2 1-2	22196341	Switch, Lever, ST.W-ST. ST.W-MONO
S3 1-4	22196567	Switch, Lever, PHONO-AUX-TAPE
S4 1-4	22196572	Switch, Lever, Band Select
S5 1-2	22196568	Switch, Slide, REVERSE MODE SELECT

Symbol No.	Part No.	Description
S6	22196601	Switch, Key, REC. Tape 2
S7	22196601	Switch, Key, FWD Tape 1
S8	22196601	Switch, Key, FWD Tape 2
S9	22196601	Switch, Key, REV. Tape 1
S10	22196601	Switch, Key, REV. Tape 2
S11	22196601	Switch, Key, Stop Tape 1
S12	22196601	Switch, Key, Stop Tape 2
S13	22196601	Switch, Key, FF Tape 1
S14	22196601	Switch, Key, FF Tape 2
S15	22196601	Switch, Key, REW Tape 1
S16	22196601	Switch, Key, REW Tape 2
S17	22196601	Switch, Key, Pause
S18	22196601	Switch, Key, Dubbing
S19	22196601	Switch, Key, High Speed Dubbing
S20	22196601	Switch, Key, Editor
S21	22196538	Switch, Leaf, Erasure Prevention A Side
S22	22196538	Switch, Leaf, Erasure Prevention B Side
S23	22196538	Switch, Leaf, CrO_2
S24	22196538	Switch, Leaf, Tape Detect
S25	22196538	Switch, Leaf, 70μ Second
S26	22196538	Switch, Leaf, Tape Detect
S27	22196539	Switch, Leaf, Metal
⚠ S28	22196653	Switch, Slide, Volt Change
J301	22198015	Jack, 3.5mmd, Headphone
J401, 402	22198016	Jack, 3.5mmd, Ext. Mic. L/R
J403, 404	22198012	Jack, US-2P, AUX/PHONO
⚠ J901	22169062	AC Socket
A001	22124884	Rod Antenna
W301, 302	22152570	Speaker, Woofer, 100mm
Z001	22153354	Filter, FM Bypass
Z101	22153299	Filter, Ceramic, FM
Z102	22153070	Filter, Ceramic, AM
Z501	22134171	Composite Parts
Z503, 504	22134172	Composite Parts
⚠ PL801	22147283	Solenoid

CAPACITORS

D = ±0.5pF, J = ±5%, K = ±10%, M = ±20%, Z = –20+80%
ABBREVIATIONS: CD = Ceramic Disk, PF = Plastic Film, EL = Electrolytic

C001/002/ C003/004/ C005/006/ C007/008	22308235	Variable Capacitor

Symbol No.	Part No.	Description
C009/010	22309183	Trimmer Capacitor MW/SW1 Antenna
C011/012	22309183	Trimmer Capacitor SW1/SW2 Oscillator
C013	22361150	CD, 15pF, 50V, J
C014	22349391	CD, 390pF, 50V, K
C015	22349391	CD, 390pF, 50V, K
C016	22361509	CD, 5pF, 50V, D
C017	22361240	CD, 24pF, 50V, J
C018	22360847	CD, 18pF, 50V, J (UJ)
C019	22360134	CD, 22pF, 50V, J (CH)
C020	22361509	CD, 5pF, 50V, D
C021	22349391	CD, 390pF, 50V, K
C022	22349391	CD, 390pF, 50V, K
C023	22349391	CD, 390pF, 50V, K
C024	22349391	CD, 390pF, 50V, K
C025	22349391	CD, 390pF, 50V, K
C101	22361470	CD, 47pF, 50V, J
C102	22361100	CD, 10pF, 50V, D
C103	22361560	CD, 56pF, 50V, J
C104	22361509	CD, 5pF, 50V, D
C105	22361120	CD, 12pF, 50V, J
C106	22342223	CD, 0.022mfd, 50V, Z
C107	22349472	CD, 4700pF, 50V, K
C108	22361150	CD, 15pF, 50V, J
C109	22349122	CD, 1200pF, 50V, K
C110	22361509	CD, 5pF, 50V, D
C111	22321050	PF, 360pF, 50V, J
C112	22361220	CD, 22pF, 50V, J
C113	22361709	CD, 7pF, 50V, D
C114	22483470	EL, 47mfd, 10V
C115	22483470	EL, 47mfd, 10V
C116	22349391	CD, 390pF, 50V, K
C118	22360329	PF, 0.022mfd, 25V, M
C119	22360329	PF, 0.022mfd, 25V, M
C120	22342103	CD, 0.01mfd, 50V, Z
C121	22488478	EL, 0.47mfd, 50V
C122	22488478	EL, 0.47mfd, 50V
C141	22349391	CD, 390pF, 50V, K
C201	22488108	EL, 0.1mfd, 50V
C202	22360331	PF, 0.047mfd, 25V, M
C203	22483101	EL, 100mfd, 10V
C204	22321051	PF, 390pF, 50V, J
C205	22360331	PF, 0.047mfd, 25V, M
C207, 208	22360327	PF, 0.01mfd, 25V, M
C209, 210	22488339	EL, 3.3mfd, 50V
C301, 302	22488339	EL, 3.3mfd, 50V
C303, 304	22360329	PF, 0.022mfd, 25V, M
C307, 308	22360332	PF, 0.068mfd, 25V, M
C309, 310	22349222	CD, 2200pF, 50V, K
C311, 312	22349471	CD, 470pF, 50V, K

Symbol No.	Part No.	Description
C315, 316	22488339	EL, 3.3mfd, 50V
C317, 318	22483470	EL, 47mfd, 10V
C319	22485100	EL, 10mfd, 16V
C320	22483101	EL, 100mfd, 10V
C321, 322	22483470	EL, 47mfd, 10V
C323, 324	22370324	PF, 0.15mfd, 50V, J
C325, 326	22483102	EL, 1000mfd, 10V
C327	22340209	CD, 100pF, 50V, K
C401	22360329	PF, 0.022mfd, 25V, M
C402	22483470	EL, 47mfd, 10V
C403, 404	22349472	CD, 4700pF, 50V, K
C405, 406	22360331	PF, 0.047mfd, 25V, M
C407, 408	22488339	EL, 3.3mfd, 50V
C409	22342223	CD, 0.022mfd, 50V, Z
C410	22483470	EL, 47mfd, 10V
C411, 412	22488339	EL, 3.3mfd, 50V
C413	22342473	CD, 0.047mfd, 50V, Z
C414	22360484	CD, 0.047mfd, 50V, Z
C415, 416	22360329	PF, 0.022mfd, 25V, M
C417, 418	22349472	CD, 4700pF, 50V, K
C419, 420	22483470	EL, 47mfd, 10V
C421, 422	22488478	EL, 0.47mfd, 50V
C423	22488108	EL, 0.1mfd, 50V
C429	22485100	EL, 10mfd, 16V
C430	22488109	EL, 1mfd, 50V
C431, 432	22362101	CD, 100pF, 50V, K
C433	22488339	EL, 3.3mfd, 50V
C503	22361100	CD, 10pF, 50V, D
C504	22360816	CD, 11pF, 50V, J
C505, 506	22483470	EL, 47mfd, 10V
C507, 508	22360543	PF, 8200pF, 50V, K
C509, 510	22360330	PF, 0.033mfd, 25V, M
C511, 512	22488478	EL, 0.47mfd, 50V
C513, 514	22488339	EL, 3.3mfd, 50V
C515, 516	22349102	CD, 1000pF, 50V, K
C517, 518	22485100	EL, 10mfd, 16V
C521, 522	22349222	CD, 2200pF, 50V, K
C523, 524	22349222	CD, 2200pF, 50V, K
C525, 526	22349102	CD, 1000pF, 50V, K
C527	22482331	EL, 330mfd, 6.3V
C528	22483101	EL, 100mfd, 10V
C529	22485330	EL, 33mfd, 16V
C530	22483470	EL, 47mfd, 10V
C532	22483101	EL, 100mfd, 10V
C533	22371222	PF, 2200pF, 50V, J
C534	22371102	PF, 1000pF, 50V, J
C535	22321198	PF, 0.015mfd, 100V, J
C536	22371103	PF, 0.01mfd, 50V, J
C537	22483101	EL, 100mfd, 10V
C538	22371103	PF, 0.01mfd, 50V, J
C539	22361100	CD, 10pF, 50V, D

Symbol No.	Part No.	Description
C540	22342103	CD, 0.01mfd, 50V, Z
C541	22360805	CD, 1.5pF, 50V, M
C542	22360810	CD, 3.9pF, 50V, K
C601	22485100	EL, 10mfd, 16V
C602	22360327	PF, 0.01mfd, 25V, M
C603	22342223	CD, 0.022mfd, 50V, Z
C604	22483470	EL, 47mfd, 10V
C605	22483101	EL, 100mfd, 10V
C801, 802	22485100	EL, 10mfd, 16V
C805, 806	22488479	EL, 4.7mfd, 50V
C807, 808	22371562	PF, 5600pF, 50V, J
C809	22488339	EL, 3.3mfd, 50V
C810	22483470	EL, 47mfd, 10V
C812	22488109	EL, 1mfd, 50V
C813, 814	22488109	EL, 1mfd, 50V
C817	22349331	CD, 330pF, 50V, K
C819, 820	22483470	EL, 47mfd, 10V
C821, 822	22485221	EL, 220mfd, 16V
C824	22349102	CD, 1000pF, 50V, K
C825	22349472	CD, 4700pF, 50V, K
C827, 828	22485221	EL, 220mfd, 16V
⚠ C901	22440729	EL, 4700mfd, 16V
C902	22483331	EL, 330mfd, 10V
C903	22342103	CD, 0.01mfd, 50V, Z
C905, 906	22342103	CD, 0.01mfd, 50V, Z
C907, 908	22342103	CD, 0.01mfd, 50V, Z

RESISTORS

1. Resistors are Fixed Carbon Film 1/6W, ±5%, unless otherwise noted.
   K = 1000, M = 1000000
2. PR is short for the printed resistor. If replacement of the resistor in PR is required, please use the substitutional fixed carbon film resistor of 1/6W, ±5% according to the following list.

R001	22584103	10K ohm
R002	22584390	39 ohm
R003	22584331	330 ohm
R004	22584331	330 ohm
R101	22584103	10K ohm, PR
R102	22584470	47 ohm
R103	22584104	100K ohm, PR
R104	22584562	5.6K ohm
R105	22584153	15K ohm
R106	22584153	15K ohm
R107	22584104	100K ohm, PR
R108	22584333	33K ohm, PR

Symbol No.	Part No.	Description
R109	22584151	150 ohm
R110	22584471	470 ohm, PR
R111	22584472	4.7K ohm, PR
R112	22584153	15K ohm, PR
R113	22651664	50K ohm, B, Variable, Fine Tuning
R114	22584153	15K ohm, PR
R201	22584123	12K ohm, PR
R202	22658761	10K ohm, Semi-fixed Variable, Free Run
R203	22584273	27K ohm, PR
R204	22584101	100 ohm
R205, 206	22584223	22K ohm, PR
R207, 208	22584102	1K ohm, PR
R209	22584681	680 ohm
R301, 302	22584103	10K ohm, PR
R303, 304	22584103	10K ohm, PR
R305/306	22651655	50K ohm, B, Variable, Volume
R307	22651582	50K ohm, W, Variable, Balance
R309, 310	22584103	10K ohm
R311/312	22651583	50K ohm, A, Variable, Tone
R313, 314	22584392	3.9K ohm, PR
R315, 316	22584271	270 ohm, PR
R317, 318	22584101	100 ohm, PR
R319	22584225	2.2M ohm
R320	22584124	120K ohm, PR
R321	22584472	4.7K ohm, PR
R322	22584103	10K ohm, PR
R323	22584271	270 ohm, PR
R401	22584102	1K ohm
R402	22584332	3.3K ohm, PR
R403, 404	22584102	1K ohm, PR
R405, 406	22584473	47K ohm, PR
R407, 408	22584103	10K ohm, PR
R409, 410	22584102	1K ohm
R411, 412	22584682	6.8K ohm, PR
R413, 414	22584103	10K ohm, PR
R415, 416	22584153	15K ohm, PR
R417, 418	22584473	47K ohm, PR
R419, 420	22584102	1K ohm
R421	22584124	120K ohm, PR
R422	22584225	2.2M ohm
R423, 424	22584123	12K ohm, PR
R425, 426	22584392	3.9K ohm, PR
R427, 428	22584334	330K ohm, PR
R429	22584124	120K ohm, PR
R430	22584470	47 ohm
R431, 432	22584225	2.2M ohm

Symbol No.	Part No.	Description
R433, 434	22584225	2.2M ohm
R435	22584223	22K ohm
R436	22584104	100K ohm
R437	22584224	220K ohm
R439	22584394	390K ohm
R440	22584332	3.3K ohm
R441, 442	22584333	33K ohm
R451	22584222	2.2K ohm, PR
R452	22584472	4.7K ohm, PR
R453	22584392	4.2K ohm, PR
R454	22584124	120K ohm, PR
R455	22584223	22K ohm, PR
R456	22584333	33K ohm, PR
R460	22584333	33K ohm
R461, 462	22584273	27K ohm, PR
R463, 464	22584153	15K ohm, PR
R465	22584223	22K ohm, PR
R501, 502	22584124	120K ohm, PR
R503, 504	22584124	120K ohm, PR
R505, 506	22584225	2.2M ohm
R507, 508	22584225	2.2M ohm
R509, 510	22584103	11K ohm, PR
R511, 512	22584222	2.2K ohm, PR
R513, 514	22584334	330K ohm, PR
R515, 516	22584153	15K ohm
R517, 518	22584152	1.5K ohm, PR
R519	22584470	47 ohm, PR
R520	22584470	51 ohm, PR
R523, 524	22584823	82K ohm, PR
R525	22584222	2.2K ohm
R526	22584821	820 ohm, PR
R529, 530	22584333	33K ohm, PR
R531	22584183	18K ohm
R532	22584183	18K ohm, PR
R533	22584391	390 ohm
R534	22584391	390 ohm, PR
R535, 536	22584225	2.2M ohm
R537	22584104	100K ohm
R538	22584123	12K ohm, PR
R539	22584104	100K ohm, PR
R540	22584154	150K ohm, PR
R541, 542	22584103	10K ohm, PR
R543	22584223	22K ohm, PR
R544	22584223	22K ohm
R545	22584821	820 ohm
R546	22584470	47 ohm
R547	22584333	33K ohm, PR
R548	22584104	100K ohm
R549	22584124	120K ohm, PR
R550	22584229	2.2 ohm
R551	22584331	330 ohm
R552	22584222	2.2K ohm, PR
R554	22584122	1.2K ohm, PR

Symbol No.	Part No.	Description
R555	22584182	1.8K ohm, PR
R556	22584272	2.7K ohm, PR
R557	22584472	4.7K ohm
R558	22584223	22K ohm, PR
R559	22584124	120K ohm, PR
R560	22584473	47K ohm, PR
R561, 562	22584225	2.2M ohm
R563	22584220	22 ohm
R564	22584124	120K ohm, PR
R601	22584103	10K ohm, PR
R602	22584103	10K ohm
R603, 604	22584104	100K ohm
R605	22584473	47K ohm
R606	22584103	10K ohm
R607	22584153	15K ohm
R801, 802	22584472	4.7K ohm
R803, 804	22658760	5K ohm, Semi-fixed Variable, Motor Speed
R805, 806	22584332	3.3K ohm
R807, 808	22658760	5K ohm, Semi-fixed Variable, Motor Speed
R809, 810	22584225	2.2M ohm
R811, 812	22584124	120K ohm, PR
R815, 816	22584121	120 ohm
R817, 818	22584222	2.2K ohm
R819	22584102	1K ohm
R823, 824	22584154	150K ohm, PR
R825	22584823	82K ohm, PR
R826	22584333	33K ohm, PR
R827	22584104	100K ohm
R828	22584224	220K ohm
R829	22584473	47K ohm, PR
R830	22584472	4.7K ohm, PR
R831	22584103	10K ohm, PR
R832	22584103	10K ohm
R833	22584333	33K ohm
R834	22584333	33K ohm
R835	22584682	6.8K ohm, PR
R836	22584154	150K ohm, PR

Symbol No.	Part No.	Description
R837	22584104	100K ohm
R838	22584682	6.8K ohm
R839	22584823	82K ohm, PR
R840	22584682	6.8K ohm, PR
R841	22584104	100K ohm
R842	22584682	6.8K ohm
R843	22584104	100K ohm, PR
R844, 845	22584681	680 ohm, PR
R846, 847	22584681	680 ohm, PR
R848, 849	22584471	470 ohm, PR
R850, 851	22584333	33K ohm
R852	22584124	120K ohm, PR
R853	22584682	6.8K ohm
R854, 855	22584124	120K ohm, PR
R856	22584124	120K ohm, PR
R857	22584104	100K ohm
R858	22584124	120K ohm, PR
R859	22584273	27K ohm, PR
R860	22584273	27K ohm
R861	22584823	82K ohm, PR
R862	22584123	12K ohm, PR
R865, 866	22584105	1M ohm
R873, 874	22500272	2.2 ohm, 1/4W, Fusible
R901	22584271	270 ohm
R902	22584331	330 ohm
R903	22584332	3.3K ohm
R904	22584270	27 ohm
R905	22584100	10 ohm

ACCESSORIES

⚠	AC01	22176615	Power Supply Cord
	AC02	22904519	Owner's Manual

TOSHIBA CORPORATION

1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105, JAPAN